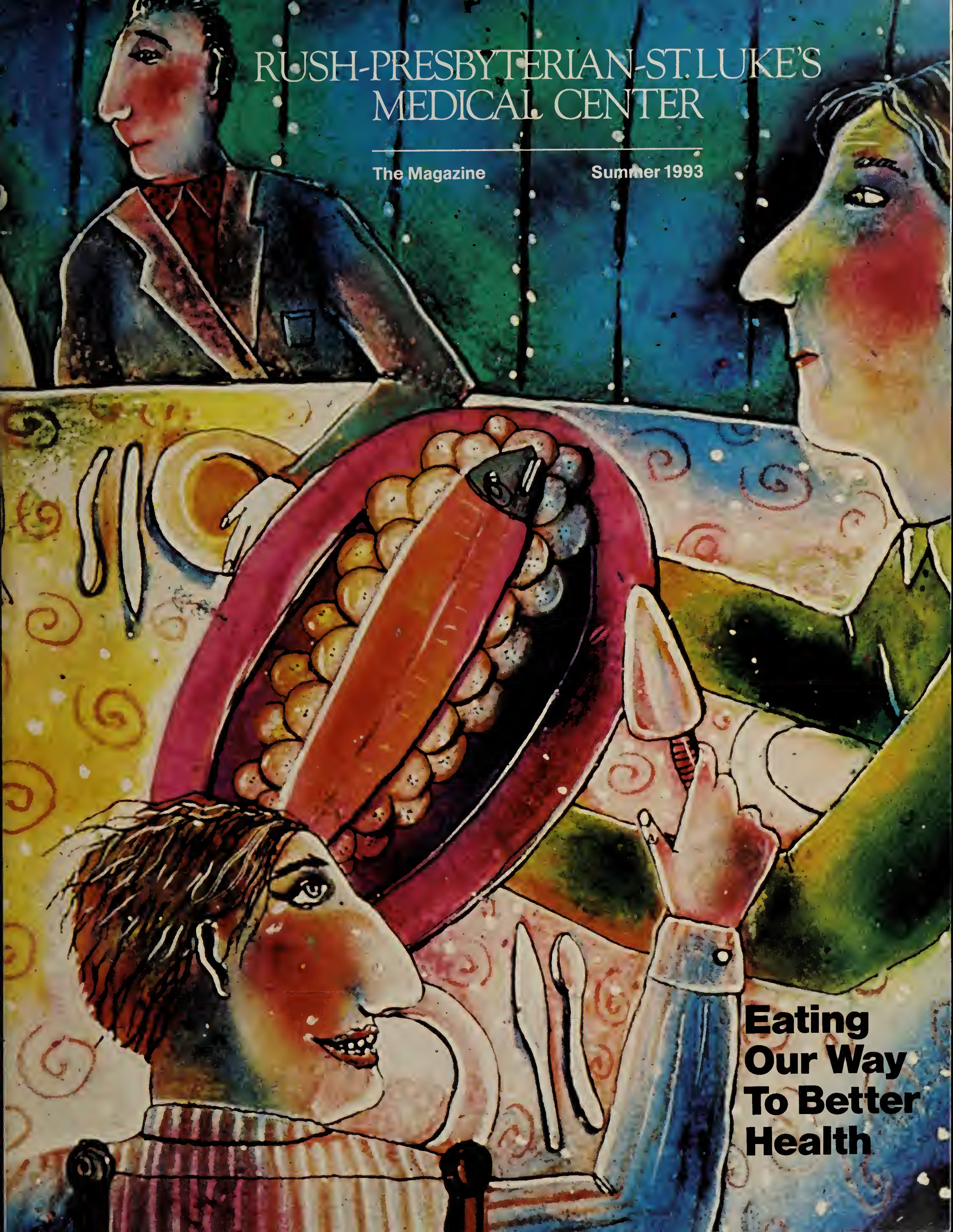
RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER

The Magazine Summer 1993



Eating Our Way To Better Health

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EATING OUR WAY TO BETTER HEALTH

Food pyramid applies the latest in research to guide us toward the right choices.

by Cheryl Janusz

When it comes to nutrition, are you the devil-may-care, potbellied type whose favorite vegetable is french fries? Or are you among the nutritional elite who can recite, to the decimal point, how many grams of fiber are in a cup of steamed broccoli?

Like most of us, you're probably somewhere in the middle, well-intentioned but confused. It's virtually impossible to pick up a magazine or tune into a news broadcast without hearing something about what we should eat and how we should eat it. The rules seem to change before we have time to update our recipe files.

But the Food Guide Pyramid offers hope for dietary enlightenment. The chart, released last year by the United States Department of Agriculture (USDA), leads us through the maze of data on fat, fiber and health.

The pyramid is the first official visual guide to menu planning since the USDA Four-Basic-Food-Group chart, introduced in the 1950s.

Now, there are six food groups, not four. Where the old chart gave each group—meats, grains, dairy and produce—an equal-size quadrant, the pyramid segregates fats, oils and sweets and exiles them to its tiny, uppermost tip. Grains, fruits and vegetables sit in the larger blocks at its base.

"The pyramid illustrates what research has shown to be a healthy diet," says Rebecca Dowling, Ph.D., R.D., associate professor and chairperson of the Department of Clinical Nutrition at Rush. "Build a diet on a foundation of grains, vegetables and fruits. Add moderate amounts of lean meat and dairy products. Limit fats and sweets."

Now Meat Is a Side Dish

Juicy steaks and honey-glazed ham can still be part of a healthy diet. But now meat is a side dish, not the focal point of meals. Rich hollandaise sauces, double-fudge brownies and other fat-laden pleasures can still be enjoyed, but as treats, not dietary staples.

"Instead of saying 'Don't eat this or that,' nutritionists and other food experts are taking a more positive approach, emphasizing that all foods can fit into a healthy diet," says Dr. Dowling. "Moderation is the key, not deprivation."

To simplify menu planning, the pyramid includes a range of recommended daily servings from each food group.

"These are based on research, conducted over the past 20 years, that shows we need more than 40 different nutrients for good health," says Dr. Dowling. "Since no single food group can supply all nutrients, variety and quantity in our diets are crucial."

Most people who don't eat enough dairy products, for example, deprive themselves of calcium, increasing their risk for osteoporosis, a condition in which the bones become brittle and porous. Strict vegetarians who avoid all meat and dairy products often fail to get enough vitamin B-12—a nutrient, found exclusively in animal foods, that is key to the body's production of red blood cells. This deficiency can lead to anemia, nerve damage and, in extreme cases, death.

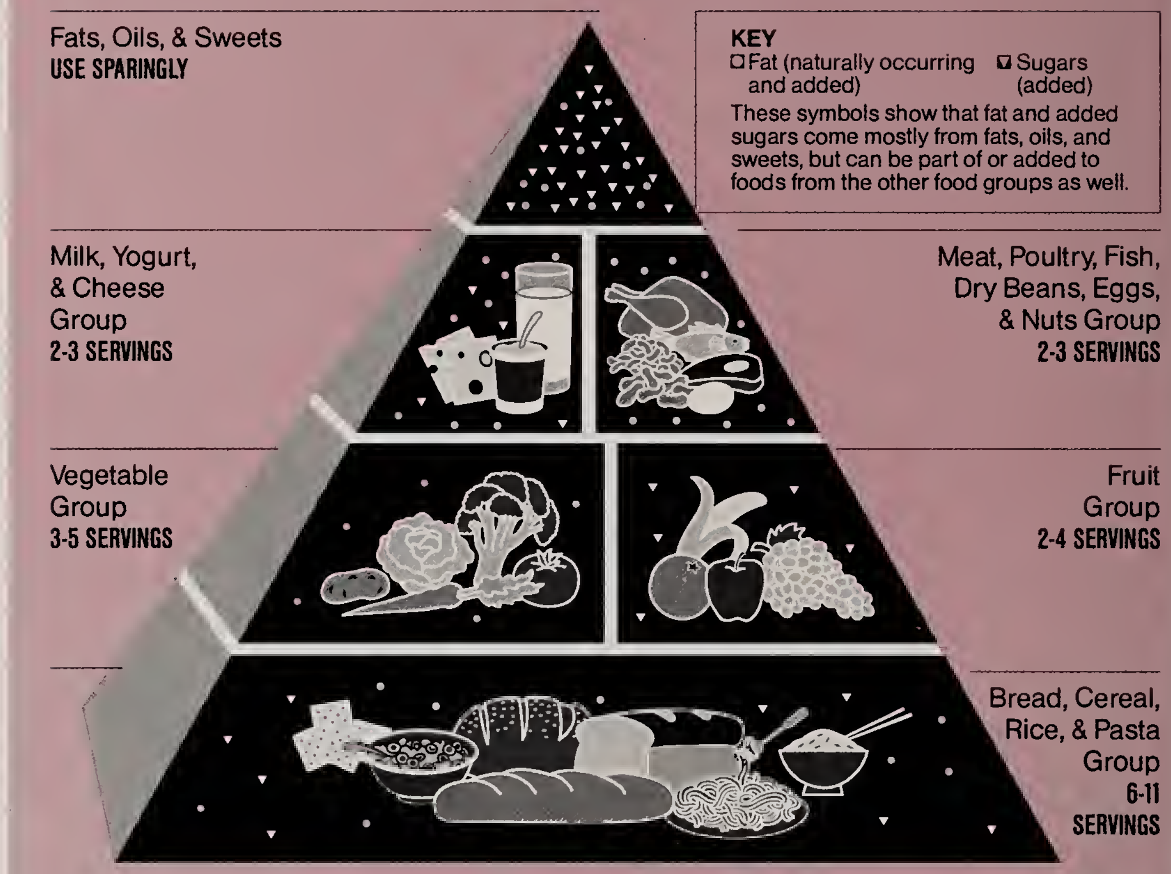
Likewise, meat-lovers who shy away from fruits and vegetables may fall short on nutrients such as vitamin C, which strengthens bones and tissues, and is believed to help the body fight infection.

"People who follow the food pyramid recommendations will be eating for health. They may also feel like they're eating more than ever before," says Dr. Dowling. This is because their diets will include more high-fiber grains, vegetables and fruits—foods that offer fewer calories and a more lasting feeling of fullness than sugary snacks.

Our affinity for candy bars, french fries and other high-fat foods is evidenced by the nation's growing girth.

Food Guide Pyramid

A Guide to Daily Food Choices


Fats, Oils, & Sweets
USE SPARINGLY
KEY
☐ Fat (naturally occurring and added)
▼ Sugars (added)
These symbols show that fat and added sugars come mostly from fats, oils, and sweets, but can be part of or added to foods from the other food groups as well.
Milk, Yogurt, & Cheese Group
2-3 SERVINGS
Meat, Poultry, Fish, Dry Beans, Eggs, & Nuts Group
2-3 SERVINGS
Vegetable Group
3-5 SERVINGS
Fruit Group
2-4 SERVINGS
Bread, Cereal, Rice, & Pasta Group
6-11 SERVINGS

SOURCE: U.S. Department of Agriculture/U.S. Department of Health and Human Services

At first glance, these amounts seem big enough to satisfy the appetite of a Sumo wrestler. How can anyone eat 11 servings of grains and six servings of fruits and vegetables in one day?

It's easier than it seems, mainly because the size of a serving is surprisingly small. A single serving in the grain group, for example, is equal to one slice of bread or one-half cup of rice. A cup of chopped raw broccoli is one serving of a vegetable. A lean steak the size of a deck of cards—about three ounces—is a serving of meat.

The exact number of servings we should eat is based on our caloric needs. The minimum six daily servings of grains might be adequate for a sedentary, middle-aged woman who takes in 1,600 calories a day. But an athletic teenage boy who needs 2,800 calories a day should probably eat the maximum 11 grain servings.

A diet following these guidelines would include the 40 different nutrients that research has shown to be necessary for good health.

> ***"Food experts are taking a more positive approach, emphasizing that all foods can fit into a healthy diet."***

According to a Lou Harris poll reported in March, two out of three Americans are overweight, up from 58 percent in 1983. Only 44 percent said they try to avoid fat and cholesterol, down from 50 percent in 1991.

In the United States, nutrition has traditionally been popularized by the press, not scientific journals. Food, like fashion, has gone through fads, from miracle vitamins to the Grapefruit Diet.

Just 15 years ago, the High-Protein Diet—basically the opposite of what more recent studies have shown to be healthy—was popularly believed to lead to both a flatter stomach and better health. "People would eat lots of meat and very little fruit, vegetables, bread, potatoes or other carbohydrates," recalls Dr. Dowling. "They would lose weight, initially, but it was mainly due to dehydration.

"Many people still try to cut back on fat and calories by substituting animal foods like beef and chicken for bread and potatoes. But in reality, bread and potatoes contain very little fat while all meats—even a skinless breast of chicken—contain some fat," she says.

Now, with the food pyramid, nutrition experts are trying to steer Americans toward eating that is based, not on fads and misinformation, but on scientific data.

"We can't guarantee that if you eat more grains, vegetables and fruits, you won't get heart disease or cancer. But right now, based on the data we have, a diet that's low in fat and high in fiber is the healthiest one we can suggest," says Henry Black, M.D., the Charles J. and Margaret Roberts Professor, and chairman of preventive medicine at Rush.

Supported by Research

Two large-scale studies released this year support the food pyramid's recommendations.

The Harvard Nurses' Health Study, which tracked the diets and health of 87,000 female nurses for eight years, found that the women who ate at least five servings of fruits and vegetables a day cut their risk for stroke by 54 percent. Another study from the University of Texas in Houston shows that men who eat a diet high in fruits and vegetables reduce their risk for heart disease by 30 percent.

Analyzing 13 different international studies, the National Cancer Institute reported that a diet containing lots of fiber-rich fruits, vegetables and grains may also decrease the risk for colorectal cancer. Other research suggests that eating produce—especially dark, leafy greens like spinach and broccoli, citrus fruits and yellow gourds like cantaloupe and squash—reduces the risk for cancers of the bladder, prostate and breast.

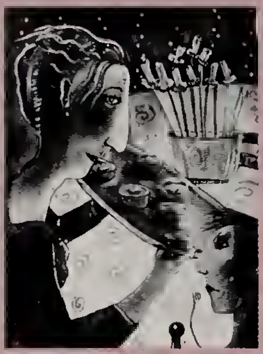
Exactly how these fruits and vegetables protect us against disease is not known, but scientists suspect that certain vitamins they contain, called antioxidants, play a role.

Beta carotene, the nutrient that gives yellow fruits and vegetables their color, is an antioxidant. So are vitamins E and C. Among their many jobs, antioxidant vitamins disarm destructive "oxygen free radicals" and other toxins, produced by the body's own cells, that contribute to the progression of cell injury and disease.

Scientists theorize that by rendering free radicals harmless, antioxidant vitamins may boost our immune defenses, creating a hostile environment for the growth of cancerous cells. There's also evidence that these vitamins stop the oxidation of cholesterol, perhaps delaying or even preventing atherosclerosis—the build-up of fatty depos-

Eating Well for a Healthy Heart

There is plenty of evidence that a fat-restricted diet benefits people who are at high risk for heart disease, as well as those who already have the illness.



Working with patients in the Rush Heart Institute's Preventive Cardiology Program, Rush dietitian Andrea Domas, M.S., R.D., designs low-fat, low-cholesterol diets based on each person's unique heart condition. She takes into account food preferences and other considerations, such as whether the person prefers to cook or eat out.

Some new findings suggest that a low-fat diet can bring immediate heart benefits. A study published earlier this year by the Medical Research Council in London found that men who ate low-fat fish dinners were at considerably lower risk for a heart attack the next morning than men who had high-fat steak dinners.

Within six or seven hours of eating, high-fat foods like steak raise blood levels of microscopic fat particles called triglycerides. A Rush study reported in April shows that triglycerides, in turn, increase blood viscosity, making blood thicker and slowing its flow.

"Blood that is more viscous tends to clot more and these clots can trigger heart attacks," explains the study's lead investigator, Robert S. Rosenson, M.D., assistant professor of cardiology and director of the Rush Preventive Cardiology Program.

Dr. Rosenson is now conducting a clinical study to determine whether high-fat meals increase blood viscosity, raising the risk for a heart attack. Working with nutrition researcher Christine Tangney, Ph.D., he is measuring the effects of different high- and low-fat meals on viscosity, as well as blood pressure, cholesterol and other factors that influence the risk for an attack.

Rush nutritionists are also examining how a person's diet affects his or her risk for heart disease. "As people adopt new heart-healthy eating habits, we're tracking how dietary factors such as vitamins E and C affect blood cholesterol and viscosity," says Dr. Tangney.

its within arteries, which can lead to heart attacks and strokes.

But this doesn't necessarily mean we should start taking beta carotene tablets with our morning coffee.

"The foods we eat provide the safest and most usable amounts of vitamins and minerals," says Christine Tangney, Ph.D., associate professor of clinical nutrition at Rush.

"Taking a vitamin tablet probably won't hurt you, but it won't counteract the effects of a poor diet either," she says. "We don't even know whether certain vitamin supplements are absorbed by the body as effectively as the vitamins we consume naturally in food."

Some vitamin tablets mimic the biochemical actions of the real McCoy.

"But others, like synthetic vitamin E, are not absorbed by the body as effectively as the 'natural' vitamin we get from foods such as spinach, wheat germ, peaches and most nuts," says Dr. Tangney.

Another example is vitamin C. Tablets made from natural vitamin C—known as ascorbic acid—are thought to offer the same benefits as the vitamin C we get from foods like oranges and strawberries. But many vitamin C supplements actually contain more *iso*ascorbic acid—a substance that resembles ascorbic acid chemically, except for a slight structural variation.

> ***"Taking a vitamin tablet... won't counteract the effects of a poor diet."***

"Because of this variation," says Dr. Tangney, "isoascorbic acid isn't used by the body in the same way as the vitamin C we get from food. If vitamin C does prevent disease, isoascorbic acid may not offer these protective effects."

If vitamin-rich foods guard against disease, a high-fat, low-fiber diet may beckon it. Approximately 70 percent of all deaths in the nation each year are due to heart disease and certain cancers—diseases that have been linked to poor diet.

The relationship between diet and heart disease is more clearly established than the link between diet and cancer. For nearly a decade, heart researchers have known that too much rich food, eaten over long periods, can clog arteries.

Dietary fat comes in two varieties, saturated and unsaturated. Saturated fats are found mainly in animal foods—from burgers and bacon to cheese and whipped cream. They are also found in coconut and palm oils, often used in commercial coffee cakes and other baked goods. A diet high in saturated fat can raise our blood levels of low-density-lipoprotein (LDL) cholesterol, the so-called "bad" cholesterol that ends up deposited as yellow streaks of fat on artery walls.

Unsaturated fats are found primarily in oils made from vegetables and plants such as olives, corn, safflower, soybeans and cornflower. Substituted for satu-

"No single food group can supply all nutrients," says Rebecca Dowling, Ph.D., R.D.

rated fat, these unsaturated fats appear to lower LDL cholesterol.

So we should stop eating meat and dairy products and start loading up on olive and safflower oils, right?

Wrong.

"Eating too much fat, even if it's unsaturated, can lead to obesity and other health problems that, in turn, increase our risk for illnesses like diabetes, high blood pressure, heart disease and cancer," says Rush dietitian Andrea Domas, M.S., R.D. "In the same respect, an occasional egg or a little butter on your baked potato won't kill you."

For the average person who doesn't have heart disease, nutritionists recommend eating foods that contain both saturated and unsaturated fat, while limiting total fat to about 30 percent of the day's calories. For most women, this means about 60 grams of fat a day, and for men, 70 grams. About one-third of this can be saturated fat, the rest, unsaturated.

As a rule, foods that are richer and greasier are also fattier. While one cup of chopped broccoli has virtually no fat, a half-cup serving of Haagen Daaz butter pecan ice cream contains 17 grams of saturated fat . . . and that's without hot fudge and whipped cream.

Balancing Your Diet

"But this doesn't mean that you can't eat hot fudge sundaes," says Dr. Dowling. "We recommend that you try to balance your diet over a few days. If you go to a party on Saturday and eat a high-fat meal, you can eat less fat the day before and the day after and still meet your goal."

A federal law passed last December will soon make it easier to keep track of dietary fat, as well as sodium, carbohydrates and fiber. By May 1994, all foods that come in cans, bottles and packages—virtually anything found in a grocery store—will wear labels that list, in grams, their content of total fat, saturated fat, cholesterol, sodium, carbohydrates and fiber.

Per the new regulations, labels must now adhere to standard definitions for descriptions such as "low-fat" and "light." And for the first time, products can legally bear the claim that specific nutrients and foods—such as calcium and fiber—"may" or "might" reduce the risk of disease.

These labels—which will appear on some products as early as this summer—will make it easier to plan healthy diets. But food experts recognize the potential for misuse.

"There's concern that consumers will completely avoid all high-fat products, and that's not the point," says Dr. Dowling. "Animal foods such as milk, cheese and chicken, all of which contain fat, also offer protein, calcium and other essential nutrients.

"Too many Americans still think a healthy diet means never eating fat, or anything that tastes good," she explains. "They alternate between eating a poor diet and feeling guilty, or completely cutting fat and sweets from their diet and feeling deprived."

To make nutrition more palatable, the American Dietetic Association and the American Institute of Wine & Food recently launched a project called "Resetting the American Table: Creating a New Alliance of Taste and Health."

Tasty and Healthy

Led by world-renowned chef Julia Child and the association's medical consultant C. Wayne Callaway, M.D., teams of chefs and nutritionists work together to create recipes —from vegetable stew to custard-drenched fruit trifle—that are tasty, affordable and meet the food pyramid's dietary recommendations. As early as this summer, these new dishes will appear on the menus in restaurants around the country.

In cities across the United States, the project is being implemented by local groups of "taste and health leaders"—dietitians, chefs, restaurateurs, food publishers and other nutrition experts. Dr. Dowling sits on the Chicago committee.

Chefs and nutritionists involved in the project are offering classes on preparing food that is both low-fat and high-taste.

"Basically, we're trying to help people rediscover the joys of eating while moving toward a healthier diet," says Dr. Dowling.

"Instead of obsessing about fat and cholesterol, we need to focus on the positive aspects of eating, like the taste of a well-prepared dish and the pleasure of sitting down to a meal with family and friends."

With forethought and seasoning, we can prepare low-fat meals that are both healthy and delicious. With moderation, we can enjoy steaks, butter, rich desserts and the other fat-laden foods we crave.

"A healthy diet doesn't have to be restrictive," says Dr. Dowling. "Meals can—and should—be fun."

So, pass the chocolate cake. ■

Trim the Fat, Boost Nutrition

It's possible to cut the fat content of many standard recipes in half and still have a dish that tastes good, says Roberta Clarke, M.S., R.D., coordinator of the Rush Outpatient Nutrition Clinic.

Little changes can make a big difference. If a recipe calls for an egg, skip the fatty yolk and use two egg whites. Substitute plain low-fat yogurt for sour cream. Instead of cooking foods in margarine or shortening, treat the pan with a nonstick spray. Don't fry vegetables, steam them—and then toss them in a little low-fat salad dressing or lemon juice instead of dousing them with butter.

Reduced-fat dairy products made from skim or low-fat milk can be substituted for those made from whole milk or cream. "In lasagna, a fat-free ricotta cheese can be used in place of a whole-milk ricotta," says Clarke. "You'll get a good cheese flavor but none of the fat."

To maximize the nutritional benefits of our meals, Clarke recommends that we choose foods that are less processed. "Fresh or frozen fruits and vegetables offer more nutritional value than those stored in cartons, bottles and cans," she explains.

As for vegetables, avoid boiling them into colorless mush.

"When you overcook vegetables, a lot of their vitamins and minerals seep into the water, so the nutrients are wasted," says Clarke. "Vegetables retain more of their nutritional value when they are lightly steamed or stir-fried."

For more tips, call the American Dietetic Association's Toll-Free Consumer Nutrition Hotline at (800) 366-1655.

Saving Our Children

Technology has gone about as far as it can to reduce infant mortality. It's time to tackle the roots of the problem.

by Marie Mahoney

Healthy children are the mark of a healthy society.

Of every 1,000 babies born in the United States each year, about nine don't live to see their first birthdays.

In Illinois, there are nearly 11 deaths for every 1,000 births. The state's infant mortality rate has consistently been one of the nation's worst, primarily because of high rates in Chicago, where the death toll tops 15 per 1,000 births.

But infant mortality is more than just a series of statistics. It stands for thousands of personal tragedies, losses that cannot be measured.

The infant mortality rate includes babies who die because they're born weeks, even months too early. It includes thousands who die because of congenital defects and apparently healthy babies felled by sudden infant death syndrome. The flu, pneumonia and infections claim many more. Accidents and neglect kill many others.

The infant mortality rate also says something about the health of a society—and it's telling us that our country is ailing. The U.S. infant mortality rate is worse than that of 19 nations with similar—even lower—standards of living. We lag behind most of Western Europe, and we're trailing such countries as Canada, Singapore and number-one ranked Japan, where the rate of five deaths per 1,000 births is only about half of ours.

"I look at infant mortality as just the end product of the social factors that underlie it," says Cynthia Williams, administrator of the Rush Perinatal Network. This regional network, with Rush as its hub, links 11 Chicago-area hospitals that care for pregnant women and infants who have intensive medical needs.

In Chicago, as in other large U.S. cities, the highest infant mortality rates are found in the poorest communities, where problems like teen pregnancy, drug and alcohol abuse, poor nutrition and infectious diseases are rampant.

"Some middle-class people may think infant mortality doesn't affect them," Williams says. "But we, as a society, pay the intensive care bills for premature infants. We pay for the long-term care of children who become disabled as a result of being born too soon. Infant mortality affects all of us."

While today's infant mortality statistics show us how far we have yet to go, history tells an inspiring story of how far we have come.

In 1900, of every 1,000 infants born in the United States, 165 died. Broad-based efforts to improve public health cut that figure in half by 1925.

Better treatments for infectious diseases such as pneumonia led to an even more dramatic decline between 1925 and 1950, with the rate dropping from 80 to just under 30 deaths per 1,000 births. Today, the infant mortality rate is less than a third of the 1950 rate.

Much of the drop can be attributed to stunning advances in the care of premature infants. Thirty years ago, John F. Kennedy's son, born weighing just under five pounds, didn't stand a chance. He died two days later. Today, a baby weighing as little as a pound and a half has about a 50 percent chance of surviving.

In fact, neonatal medicine's greatest success story has been the development of treatments for the disease that killed President Kennedy's son—hyaline membrane disease.

Also known as respiratory distress syndrome, this disease strikes babies born before their lungs have matured. These infants don't produce enough of a natural lubricant—called surfactant—that keeps millions of tiny air sacs in the lungs open when the baby breathes out.

This disease, once almost always fatal, was the number-one cause of death in premature infants. By the late 1980s, it had dropped to fourth place.

Thousands of infants have been saved with ventilators that came on the scene 20 years ago. They help babies breathe by forcing air sacs open with a high-pressure flow of oxygen-enriched air. More recently, physicians have been able to inject natural or synthetic surfactant directly into the lungs. This reduces the time infants spend on ventilators. It's not a cure for respiratory distress syndrome, but it greatly reduces its symptoms.

Other developments include miniaturized equipment, computers to monitor vital signs, a method for delivering nutrition directly into the bloodstream, and sensitive diagnostic tests that require only a few drops of an infant's blood, rather than a whole tube.

Good prenatal care is the best way to give babies a healthy start.

But treatment advances have also brought new challenges, says neonatologist Werner Meier, M.D., associate professor of pediatrics and codirector of the Rush Perinatal Center.

"While we have been able to decrease mortality in very small babies, we are seeing an increase in complications—such as chronic lung disease, bleeding in the brain and an often fatal gastrointestinal disease called necrotizing enterocolitis.

"We're struggling to find the best way to nourish these babies, to prevent infections, to help them catch up developmentally with larger babies," he says.

"We try to imitate the mother's womb, but we'll never be able to duplicate what nature has learned in thousands of years of evolution."

Technology's Limits

There is good evidence that we are nearing the limits of technology's ability to save the tiniest babies.

"After decades of dramatic improvement, we're now measuring changes in the infant mortality rate in decimal points," says Rush epidemiologist Barbara Luke, Sc.D., M.P.H., who is studying trends in U.S. infant mortality rates over the past decade.

There are two main reasons for the slowdown, says Dr. Luke, who directs the Section of Reproductive Perinatal Epidemiology.

First, the number of low-birth-weight babies, especially those classified as very low birth weight—under three pounds, five ounces—is increasing rapidly. At the same time, improvements in the mortality rate for extremely small infants is slowing to a crawl.

Low birth weight—either as a result of retarded growth during a full-term pregnancy or, more typically, premature birth—is the strongest factor influencing an infant's risk of dying.

The problem is acute in the African-American community. Nationally, black infants are more than twice as likely as white infants to be born at low birth weights and, consequently, to die during infancy. In Chicago, the infant mortality rate for black babies is three times that for whites.

Reasons for the disparity are not clear. It cannot be attributed to the average educational level of black versus white mothers, since the difference is constant even among women of comparable education. There is some evidence that black women are more susceptible to medical conditions associated with low birth weight. Experts are also exploring whether there is a genetic link, similar to the one that predisposes blacks to sickle cell anemia.

Whatever the reason, says Dr. Luke, the healthcare community should focus its efforts on finding ways to increase the number of babies born full term and at normal birth weights.

In most cases, low birth weight and prematurity can be avoided with prenatal care, usually available at less than the cost of a single day in intensive care, which runs around $2,000.

"For women who have a history of delivering premature babies, or who have had complications in earlier pregnancies that place them at risk for delivering prematurely, prenatal care gives us a chance to influence their life-styles and health," says Howard Strassner, M.D., director of the Section of Maternal-Fetal Medicine in the Department of Obstetrics and Gynecology and codirector of the Rush Perinatal Center. Dr. Strassner is a member of the Governor's Task Force on the reduction of infant mortality.

"Without prenatal care, what costs a few dollars now could cost thousands later and what costs thousands now could cost hundreds of thousands later," he says.

Better Access to Care

But getting good prenatal care for all the poor women who need it is easier said than done.

"There's a lot more demand for prenatal services than there is capacity," says Stephen M. Gillenwater, M.A., director of the Adolescent Family Center at Rush. The center provides low-cost prenatal care to pregnant teens and young women, as well as counseling and education services to help teens learn how to avoid becoming parents before they're ready.

But Gillenwater and others in the trenches are optimistic about the chances for success of two new programs designed to lower the infant mortality rate by increasing access to health care and public services for pregnant women and their kids.

Healthy Moms/Healthy Kids was launched this past April by the Illinois Department of Public Aid, which administers the state's Medicaid program. Under the new program, a pregnant women who is on Medicaid or eligible for the service chooses a primary care physician who will take care of the delivery in some cases, and who will provide for her health needs after delivery. If the primary care physician does not perform deliveries, she can choose an obstetrician from a list of providers. After her child is born, the program can help the mother find a pediatrician for the child's continuing care. Case managers link women with other social services, including family planning education and transportation to medical appointments.

Infant mortality is just the end product of the social factors that underlie it.

The Rush departments of obstetrics and gynecology and pediatrics are participating, as is the Adolescent Family Center.

"Healthy Moms/Healthy Kids emphasizes the importance of early prenatal care," says Michael Maffetone, D.A., associate vice president and director of the Rush Women's and Children's Hospital.

"It also encourages women to look at health care as an ongoing need," he says. "We're hoping this will eliminate some emergency room visits. It's also likely to cut down on the number of extremely ill patients we see."

Healthy Moms/Healthy Kids will work alongside a program coordinated by the Illinois Department of Public Health.

The Chicago Area Healthy Start Project is part of a five-year federal initiative, launched in 1991, to lower infant mortality in Chicago and 14 other U.S. cities with high rates.

Healthy Start's goal is to cut infant mortality in half in six targeted neighborhoods surrounding the Loop—Near North, West Town, Near West, Near South, Douglas and Grand Boulevard. In 1990, the infant mortality rate in these communities averaged nearly 22 deaths per 1,000 births, or more than twice the national rate.

Rush, which sits in the middle of the Near West neighborhood, is part of a consortium of area hospitals, businesses, government agencies, and schools charged with getting the project off the ground.

Healthy Start project leaders say the goal can be reached by attacking the root causes of infant mortality.

Today, about 14 percent of the babies in the area are born at low birth weights, but they account for nearly 7 of every 10 deaths. One objective is to reduce the incidence of low birth weight babies to no more than 10 percent of all births.

This large task has been broken down into several smaller jobs. One of these is to reduce the number of infants who have been exposed to illegal drugs.

To do this, Healthy Start is working with the Illinois Department of Alcohol and Substance Abuse to set up special treatment programs for pregnant women with substance abuse problems.

Another objective is to reduce the number of unplanned pregnancies in the area. As part of this goal, the Medical Center's Adolescent Family Center has received funds to step up its family planning services for teens in the targeted communities.

Rush pediatrician Richard Sandler, M.D., thinks that programs like Healthy Start have the right idea. Dr. Sandler, a member of Physicians for Human Rights, has been involved in efforts to improve the health and well-being of children around the world.

"If you look at the decline in infant mortality rates worldwide, most of what's been accomplished has been through public health campaigns, not medical advances," he says.

"Clearly, the problem of infant mortality is not strictly a medical one," he says. "Solving it requires that the medical community raise a clear voice in support of public health initiatives." ■

New Frontiers in Cancer Care

There are now more treatment options for people with head and neck cancer, once almost always disfiguring and debilitating.

by Sara Parker Floyd

There was a time right after her surgery when Rose Augsburg-Drach was afraid to look at her face in a mirror.

Last summer, the 29-year-old high school teacher—who couldn't find relief from severe headaches and other sinus problems—was diagnosed with a rare form of cancer. It took surgeons seven hours to remove a tumor from the small space above the soft palate at the back of the roof of her mouth.

"My family kept saying, 'You look fine.' But I refused to look in the mirror because I was afraid the surgery had changed my face," she remembers.

"Finally, five days later, I looked at myself, and it was nothing. If I didn't tell you I'd had surgery on my face, you'd never know it."

Not too long ago, surgery for patients like Augsburg-Drach was tricky at best and, in many cases, impossible.

A tumor in the skull base was considered inoperable before the mid-'70s, says David Caldarelli, M.D., the Stanton A. Friedberg, M.D., Professor and chairman of Otolaryngology and Bronchoesophagology at Rush.

"Surgical techniques to effectively remove these tumors really took hold in the 1980s. Now we can more easily remove tumors in the nose, around the ears, in the upper part of the throat called the nasopharynx, and in areas of the skull base."

But it isn't just surgery that gives today's patients a better future. At the Rush Head and Neck Cancer Center, doctors are using radiation therapy, chemotherapy or surgery—and often a combination of the three—to treat some of the most complex cases.

At highest risk are older men who have long been smokers and drinkers, but they're not the only ones who get this type of cancer. People who don't drink alcohol and never smoked get the disease and a growing number are women.

Overall, 1 in every 20 new cases of cancer diagnosed each year involve the head and neck area. Its impact is measured not only in numbers of victims, but in how severely it can disfigure and debilitate them.

Tumors of the head and neck are often close to—and sometimes intertwined with—vital nerves and arteries. They are most likely found in the mouth, voice box or throat. The hardest to treat are tumors in the skull.

"The junction between the brain, the eyes and the sinuses used to be referred to as 'no-man's land,'" says William R. Panje, M.D., a professor in otolaryngology and director of Head and Neck Reconstruction and Skull Base Surgery at Rush.

"It's in this area that benign tumors can be considered dangerous just because of their location. If they were on your arm or your chest, they'd be nothing. But because they're located there, they can be extremely dangerous.

"They hurt nerves, make people blind, take away their speech, affect their swallowing. They don't have to be malignant to do these things. Malignant tumors are even more devastating."

Augsburg-Drach's tumor was malignant and her treatment was particularly intensive, involving all three methods of treatment—chemotherapy, radiation and surgery.

The tumor had lodged itself in the nasopharynx—a tiny space about the size of a nickel—between the ceiling of the sinuses and the floor of the brain, near cranial nerves and the carotid

"If I didn't tell you I had surgery on my face, you'd never know it," says Rose Augsburg-Drach.

artery, a principal source of blood to the head and neck.

To get at it, Dr. Panje, her surgeon, performed a relatively new technique called cranial facial resection, following tissue lines in the face so that there is almost no visible scar after the surgery.

"Now all you'd notice is a curve at the corner of my left eye," says Augsburg-Drach.

Over the past decade, advances like these both inside and outside the operating room have dramatically increased the chances of saving patients' lives and preserving their appearance.

A combination of radiation and chemotherapy, a potent method of treatment, was developed by Rush doctors in the early 1980s. (See story, page 17.)

At the same time, clinical and laboratory work has lead to the development of new instruments and techniques so that surgery is no longer necessarily mutilating and debilitating.

"In head and neck surgery," explains Dr. Panje, "you have to be able to get into small crevices and under certain areas and you don't want to destroy that area."

Advanced surgical tools such as endoscopes, lasers and microscopes make the process of removing tumors from the delicate areas of the head and neck much more precise.

> ***"In head and neck surgery you have to be able to get into small crevices and under certain areas and you don't want to destroy that area."***

The endoscope, a long, thin tube with an attached optical device, has become so refined that today surgeons can insert it into natural openings or tiny incisions and see into spaces only millimeters wide.

Lasers, intense light beams used as scalpels, have been around for about 20 years. But when Dr. Panje first started in medicine, they were the size of a small room, requiring that the patient be moved underneath and around the equipment.

"Now lasers are so small, you can carry them in a suitcase," Dr. Panje says. "Using a laser, a surgeon has a lot of control. You can get a tumor from near the carotid artery using a laser."

Modern operating microscopes further extend the surgeon's capabilities in the delicate process of removing tumors.

"With the microscope I can look at

small areas and move the tumor away from nerves and small blood vessels without hurting them," Dr. Panje says. "The microscope also allows me to rehook nerves and blood vessels that may be as thin as a thread or a hair."

Along with these tools surgical techniques evolved to conserve and reconstruct certain areas so that chances are better for rehabilitation and restoration of swallowing, speech and facial appearance.

To remove a tumor in the head, the surgeon might go in through the nasal cavity by peeling back the nose or through the side of the head by pushing back the skull and part of the face.

Avoiding Complications

"We're using natural areas in the head, such as the cavity where the nose is, to get to where the tumor is," Dr. Panje says.

"In the head and neck we're dealing with many senses, and in operating in this area we have to preserve those functions so we tailor the treatment to avoid complications."

About five years ago, Dr. Panje was among the first in the country to perform skull-base surgery and intraoperative radiation.

Says Dr. Panje: "We use radiation therapy during the operation so that radiation does not have to pass through other structures of the head and neck, such as the eyeballs and skin. If you radiate an eyeball, the patient gets a cataract; if you radiate salivary glands, the patient gets dryness in the mouth."

With this method, radiation is applied through a glass tube placed directly over any remaining tumor cells.

"We can direct the radiation right at the tumor source and give it a tumor-killing dose, one dose," Dr. Panje says.

In many cases, eliminating the tumor is just the first step. Just as important are reconstruction and rehabilitation.

Surgeons can move tissue, transfer bone, and connect arteries and veins under a microscope.

"You can take a piece of the front part of the leg with a little bone and put it up where the jaw was. It's like plugging a piece in a jigsaw puzzle," says Dr. Caldarelli. "The transferred tissue continues to live in its new location. It's just nourished by different arteries and veins."

Unlocking the Mysteries of Cancer

A high-powered microscope brings a slide with a sample of cancer cells into focus. Looking intently at a nearby monitor, an investigator studies the cells—clustered together like beads of water—to determine how rapidly they are dividing.

Here in the labs at Rush, researchers are working to unlock the mysteries of how cancer cells behave and why they sometimes resist treatment. One of the diseases figuring prominently in these investigations is head and neck cancer.

Research by Rush oncologists Harvey Preisler, M.D., and Azra Raza, M.D., has shown that in leukemia, the rate at which tumor cells divide plays a major role in determining how the patient responds to treatment. Specifically, the faster the cells divide, the less effective the patient's response.

Dr. Preisler, new director of the Rush Cancer Institute, came to the Medical Center from the University of Cincinnati Medical Center last December. He and his research team are now applying what they've learned about leukemia to solid tumors, like head and neck cancer.

"Head and neck cancer and leukemia are not completely different," says Dr. Preisler. "They're both neoplastic—or malignant—diseases. One affects the bone marrow, the other affects the cells in the head and neck region. But they're both tumors, so the same principles should apply to each."

Dr. Preisler says that in head and neck cancer there is indirect evidence that there is considerable tumor regrowth in the course of treatment, which offsets the effects of radiation and chemotherapy.

"We want to be able to slow the regrowth of tumors between courses of treatment so the treatment itself will become much more effective," he says.

In their leukemia studies, Drs. Preisler and Raza developed a method to precisely measure and slow cell growth. They found that synthetic vitamin A and interferon were effective in slowing growth. "We've just started studying them with head and neck patients," he says.

Dr. Preisler and his colleagues are also investigating the genes that control how fast cells divide. "One of these genes is abnormal in many people with head and neck cancer," says Dr. Preisler. "We would like to see whether or not the abnormality affects the rate at which the cells divide."

Knowing how fast cancer cells divide will influence treatment, says radiation oncologist Anantha Murthy, M.D., director of the Head and Neck Cancer Center at Rush.

"For example, to see how effective radiation therapy is in treating patients, we will measure the growth rate of tumors before we start radiation and then measure the growth rate of tumors during radiation," says Dr. Murthy.

"By looking at the proliferation of these tumors, we can see that different types of treatment are more appropriate for different types of tumors," he says. "We want to be able to tailor a treatment for each patient."

Discoveries about head and neck cancer may help solve the mysteries of other cancers. Dr. Preisler believes that head and neck cancer serves as a "model system" for understanding lung cancer, the leading cause of cancer death, because most lung tumors are the same cell type as tumors found in the head and neck.

What is learned about cancer cells in the lab will have far-reaching implications for patients in the Rush Cancer Institute.

"Advances in research will be taken to the bedside much more rapidly than if the Institute didn't exist," says Dr. Preisler.

"With the microscope I can... move the tumor away from nerves and small blood vessels without hurting them," says William R. Panje, M.D.

With reconstructive surgery, a dental prosthesis can be put into a jaw that doesn't have teeth, and prosthetic eyeballs can be attached. But beyond appearance, more important for a patient's quality of life is rehabilitation, which is the goal at the Rush Head and Neck Cancer Center.

"We strive to treat patients so that they can look normal, speak normally and be able to eat," says Michael Friedman, M.D., a surgeon specializing in reconstruction and rehabilitation of head and neck cancer patients.

Most of his work has involved removing tissue from one part of the body to rebuild another.

To rebuild the mouth, for example, the traditional approach has been to take the muscle and skin from the chest. "But the skin and muscle from the chest is not necessarily a good substitute," says Dr. Friedman, "so we've developed other ways, such as taking the skin and muscle from the neck to reconstruct the mouth."

Dr. Friedman has developed a way to rebuild the voice box of people with thyroid cancer who, due to surgery to remove the cancer, have lost the ability to speak.

"I build a rigid tube with the periosteum—a membrane covering bone surfaces," Dr. Friedman explains. "I then move the flap with its own blood supply to the trachea, and it eventually grows into the space and creates a new voice box that can help the person speak and breathe normally."

Back to Normal

Even though surgical techniques have advanced and treatments are now more effective, many patients with head and neck cancer often struggle with after effects of the disease in its treatments, such as difficulty speaking and/or swallowing.

Mary J. Bacon, M.S., a speech/language pathologist at Rush, sees patients whose normal patterns of speaking and swallowing have been affected by surgery. Many of the people she treats have head and neck cancer.

She might teach people who've had their voice boxes removed how to use a voice prosthesis or how to speak using the esophagus, the tube that runs parallel to the voice box.

"For patients who've had surgery to the mouth and tongue, I find out what sounds they can't articulate and what part of the tongue they're using," says Bacon. "I then help them articulate those sounds to produce more normal speech.

"I try to help people return to their normal way of talking and eating, or as close to it as possible."

Getting patients back to normal requires a multidisciplinary approach to care, says Anantha Murthy, M.D., director of the Rush Head and Neck Cancer Center.

"A patient's first chance at treatment is the best chance, and with the input of various specialists at the beginning, such as surgeons, medical oncologists and radiation oncologists, the patient has the chance for the best care." ■

Chuck Steinmann with his kids, Ashley, 6 and Chuckie, 10.

Finding the Best Treatment

Surgery for head and neck cancer isn't always the best option—or even possible—as in the case of businessman Chuck Steinmann.

His cancer was found in the lymph nodes in his neck, but his doctors were never able to determine exactly where the cancer had originated.

"The tumor was not defined. It was feathery in shape and had spread all over the place," says Steinmann, who remembers that it was on his daughter's third birthday when his wife, Denice, urged him to see a doctor about the lump on his neck.

Steinmann was treated with a combination of radiation and chemotherapy, a potent method of treatment developed by Rush doctors in the early 1980s.

In combination, each is more effective than if used alone, explains Rush medical oncologist Samuel G. Taylor IV, M.D.

The radiation and chemotherapy treatments were alternated every other week for two and a half months. With chemotherapy alone, treatments often last six months or longer; radiation treatments alone take seven to eight weeks.

Steinmann was given two chemotherapy drugs which have proven to be particularly effective in killing tumors of the head and neck. The chemotherapy then boosted the effectiveness of the radiation treatment.

"This method of combining the treatments is used most often when the cancer is inoperable, as in Steinmann's case, or when surgery to remove the tumor would cause mutilation," Dr. Taylor says.

Giving a patient combined radiation and chemotherapy, in alternating doses, allows normal tissue to recover without giving cancer cells the chance to repair themselves. The downside, however, is that it can be tough for the patient to endure the potency of the treatment.

"I lost 70 pounds and had to have blood transfusions. I lost my hair. I lost the feeling in my limbs. But I made it," Steinmann says. "Shay Jacobson, the nurse coordinator at the Head and Neck Cancer Center, always took the time to make sure I had a thorough understanding of what was happening to me. My wife was my source of strength."

According to Dr. Taylor, the major risk of recurrence is within the first three years. Steinmann passed that mark this spring, on his daughter's sixth birthday.

"He's recovered from the side effects," says Dr. Taylor. "His hair has come back, he no longer requires blood transfusions and he's gained back the weight that he lost."

Says Steinmann: "Before I got cancer I had thought I was immortal. I jogged every day and could bench press over 400 pounds.

"I'm right back to pushing myself again, but now I cherish my family more, and I make more of an effort to spend time with my wife and kids."

Ed McCaskey

New Institute Puts Heart Into Cardiac Care

by Cheryl Janusz

For Chicago Bears Chairman Ed McCaskey, it started with some shortness of breath and viselike pressure in his chest. The next day, when this vague discomfort became intense, nauseating pain, he knew he was having a heart attack—a big one.

Just a few decades ago, most people who had massive heart attacks died. Those who did survive were usually left weak and crippled, their damaged hearts barely able to sustain life. But seven years and two major heart surgeries after his attack, 74-year-old McCaskey says he feels "like a young man." He has more energy and vigor than many men half his age.

McCaskey, like millions of other recent heart attack survivors, is proof that coronary heart disease is no longer a death sentence. Thanks to more precise diagnostic tests, better medications, new technologies for clearing blocked arteries, lifesaving surgeries and more awareness about prevention and rehabilitation, the death rate for heart disease continues to plummet.

But the battle isn't over, for heart disease remains the leading cause of death and disability in the United States. Searching for better ways to fight this illness, the Medical Center recently opened the Rush Heart Institute.

The Heart Institute brings all aspects of diagnosis, treatment, preventive care and research together in one program, codirected by Joseph E. Parrillo, M.D., the James B. Herrick, M.D., Professor of Heart Research, and Hassan Najafi, M.D., the Mary and John Bent Professor of Cardiovascular-Thoracic Surgery.

"The Institute builds on the specialized, state-of-the-art cardiac care that Rush is known for, with added emphasis on convenience for our patients," says Dr. Parrillo, medical director.

All outpatient diagnostic tests are conducted on the 11th floor of the Medical Center's Professional Building. "In most cases," says Dr. Parrillo, "when a patient arrives in the morning, we can conduct the necessary tests and offer a summary of the heart problem by that same afternoon."

The Institute staff includes specialists in cardiology, cardiovascular-thoracic surgery, nursing, diagnostic radiology, physical therapy, psychology and clinical nutrition. Working as a team, they tailor a treatment plan for each patient.

"The Institute is designed to help virtually any heart patient, from the most severely ill patients who need heart transplants to people who don't have heart disease but are at risk for developing the illness," says Dr. Parrillo.

For those with a family history of cardiac problems and others believed to be at higher risk, the Institute offers a Preventive Cardiology Program. Here, a multidisciplinary team of specialists creates individualized, one-year plans to reduce risk factors such as obesity, high blood pressure and high cholesterol.

Anyone diagnosed with heart disease is evaluated by a cardiologist and, if necessary, by a cardiovascular-thoracic surgeon. "The surgeon and cardiologist work together to determine the best treatment," says Dr. Najafi, the Institute's surgical director.

Some patients benefit from medication and life-style changes such as cutting back on dietary fat, starting a regular program of exercise and quitting smoking. Others need a procedure like angioplasty, in which a balloon-tipped catheter is used to open a cholesterol-clogged artery. Still others need bypass surgery, in which a diseased artery is replaced with a healthy one, taken from elsewhere in the body.

The Institute offers all of these conventional treatments, as well as newer, high-tech alternatives. Patients with more severely clogged arteries, for example, may undergo excimer laser angioplasty, in which the cholesterol plaque is vaporized with a beam of laser energy. Another option is an atherectomy, in which a blade-tipped catheter dissects and removes the plaque.

One of the Institute's main priorities is research. Many Institute patients are eligible to take part in studies of investigative technologies and therapies—treatments that may help when standard options have failed.

Promising therapies under study include a drug that may minimize the damaging effects of heart attacks. Researchers are also evaluating a nonsurgical technique, catheter ablation, which removes the scar tissue left by a heart attack. This scar tissue can trigger abnormal heart rhythms which can, in turn, cause sudden death.

In the new Cardiovascular Research Laboratory, scientists are studying more basic topics, such as inherited traits that may increase risks for heart muscle disease. Researchers are also investigating the possibility of substituting back muscle for a badly damaged heart muscle. "This technique may ultimately be an alternative to heart transplants," says Dr. Parrillo.

Scientific exploration and state-of-the-art technology are essential to the Rush Heart Institute. But the main focus, explains Dr. Najafi, is patients.

> ***"Life is sweet—and I want to enjoy every bit of it!"***

"Good medical care is more than making the right diagnoses and selecting the right treatments," he says. "We also have to consider the human elements.

"Being told that you have a serious illness like heart disease and that you require major surgery can be very frightening," says Dr. Najafi. "As physicians, we have a responsibility to instill in our patients and their families a sense of confidence, to allay their fears. Because heart disease is a chronic illness, we tend to develop long-standing relationships with patients."

Through regular follow-up, it is possible to detect new heart problems early, when they can usually be treated more easily and effectively.

McCaskey, for example, had two major heart surgeries—a triple bypass in 1986 and an operation to repair his disease-ravaged aorta in 1987. Both were performed at Rush by Dr. Najafi.

To keep his heart strong, McCaskey goes for cardiac rehabilitation at the Rush-affiliated Holy Family Hospital, located near his home in Des Plaines. He exercises on a treadmill three mornings a week, under the supervision of exercise physiologist Paul Bergman, M.S., and his staff.

"After my bypass, life became doubly sweet. Having a sandwich with a close friend, sitting down to a family meal—these things mean more after a close call," he says.

Heart disease has prompted McCaskey to make some changes in his life-style. He now walks several miles a day and he avoids foods high in fat and salt.

"I still enjoy my food, but not my cigars. My cardiologist at Holy Family, Dr. Steven Hersh, says I can carry a cigar and chew it, but I had to promise never to smoke it. Since then, I haven't taken a puff," sighs McCaskey, who smoked cigars for almost 50 years.

"But I can't complain. I'm lucky to be here…and I have Rush, Dr. Hassan Najafi and Dr. Steven Hersh to thank."

In February, McCaskey and his wife, Virginia, marked their 50th wedding anniversary with a party attended by their 11 children and 20 grandchildren. For McCaskey, the event was just one of many causes for celebration.

"Every morning I wake up, and I thank God for my life and my health. I don't ever want to be the kind of guy who sits around moaning about his aches and pains," he says.

"Life is sweet—and I want to enjoy every bit of it!" ■

Home Sweet Home

Home care agencies provide alternatives to hospitalization for patients of all ages.

by Marie Mahoney

Zyra Gordon-Smith, R.N., drives a familiar route up, down and around the streets of Chicago's Gold Coast. She moves her head from side to side like a searchlight, scanning for someone deserting one of the precious metered spots. "This is my little game," she says. "You've got to have eagle eyes to find parking around here."

Gordon-Smith is a visiting nurse with the Medical Center's home health care agency, Rush Home Care-Chicago. Her first stop—on a day that will take her from one of the city's most affluent neighborhoods to one of its poorest—is the high-rise apartment of an elderly Russian woman.

Gordon-Smith is preparing the woman for an upcoming chemotherapy treatment for stomach cancer. She uses an expert blend of Pidgin English, pantomime and a ready smile to cross the language barrier. "Is good nurse," says the appreciative patient. "Spasibo," Gordon-Smith replies, trying out some newly learned Russian—the word for "thank you."

If you take away her portable phone and pager, Gordon-Smith is a lot like her professional counterpart at the turn of the century. Then, crowded conditions in the nation's cities spawned rampant infectious disease, creating a great demand for visiting nurses to minister to the poor working classes. On the other end of the socioeconomic spectrum, private duty nurses sat at the bedsides of more well-to-do patrons.

Today, the pressure to cut hospital costs, coupled with a growing awareness that home-based care is the best option for many patients, is taking American health care full circle to a more traditional model. Hospital beds are increasingly reserved for the acutely ill. Home health care—growing at about 12 percent annually—is filling the breach.

But modern home health agencies offer tradition with a twist. Within the past 5 to 10 years, many medical technologies once available only in the hospital have been adapted for the home—and can be offered there at a fraction of hospital costs. Today's home care nurses are technically skilled far beyond their peers of even a decade ago. Physical, occupational and speech therapists—previously employed primarily in outpatient or institutional settings—are making more home visits.

"You can almost have a whole hospital set up at the bedside," says Rush family medicine physician Steven K. Rothschild, M.D., pointing out the availability of home ventilators and portable dialysis machines, as well as smaller IV pumps that deliver intravenous nutrition, chemotherapy, painkillers and antibiotics in the home.

"The range of home care's applicability in medical practice is enormous," says Dr. Rothschild. From the baby with a congenital heart defect released from the hospital to celebrate her first birthday at home, to the 40-year-old woman receiving follow-up care after breast cancer surgery, to the 80-year-old man who needs stroke rehabilitation—home care offers a cost-effective and humane alternative to long hospital stays for patients of all ages.

A Success Story

Orlunus Thomas lives in a Chicago Housing Authority apartment for senior citizens on the city's Near West Side. The feisty 80-year-old, who lives alone and has no relatives nearby, looks forward to visits every other Thursday from Rush Home Care's Gordon-Smith, who comes to change the catheter that does the work of his bladder.

Thomas becomes one-half of a com-

At left: There's no place like home for Paula Mroz, shown here with her father, Rich.

edy team when Gordon-Smith walks in the room.

"How's the baby? Is she asking for the car yet?" he asks, chuckling in anticipation of the punchline.

"No, but she's driving her parents crazy," answers Gordon-Smith, the mother of 1-year-old Ivory.

Gordon-Smith, working with Rush family medicine physician Fred Richardson, Jr., M.D., has been seeing Thomas for about three years as part of a special Rush Home Care program that provides health care to homebound residents of the CHA complex who might not otherwise receive medical attention.

She can remember a day a couple of years ago when her friend's eyes didn't light up so brightly when she came to the door.

On that day, she found the normally bubbly and energetic man sullen and unkempt. His cupboards were empty. The apartment, which Thomas always keeps a little too hot for comfort, was on the boil—raising his risk of dehydration. Gordon-Smith suspected Thomas was being dragged down by a serious infection, even though his vital signs seemed normal and he didn't have a fever.

"He just looked horrible—he wasn't himself. I knew something was wrong, so I called Dr. Richardson," she says.

Later that day she picked up the physician in his Oak Park office and the two went back to Thomas's apartment, armed with blood test kits and antibiotics. "Mr. Thomas was clearly sick enough to be hospitalized, but he refused," she says. So, after restocking the empty refrigerator and preparing a meal, they left promising to return the next day.

"When we checked on him the next day, he couldn't walk to let us in the door," says Gordon-Smith. "He had to slide out of bed and pretty much scooted on his butt to the door to open it. We had to pick him up off the floor. Even then he didn't want to be hospitalized."

Thomas reluctantly agreed to go to the hospital when he was reminded of the terms of his lease, which requires residents to be able to live independently—something he obviously couldn't do in his state.

Gordon-Smith and Richardson's stubborn efforts have paid off.

Home care nurse Zyra Gordon-Smith, R.N., hits the road.

Before they intervened, Thomas had been in and out of the hospital frequently for serious urinary tract infections. Since then, he's only been hospitalized once, for an unrelated blood pressure problem. As an added precaution, Gordon-Smith now makes more frequent visits, to keep infection at bay. Because Dr. Richardson and Gordon-Smith took care of him when he didn't have the strength to take care of himself, Thomas is more aware now of the importance of playing an active role in maintaining his own health.

The Effect of Medicare

Medicare, the federal program that provides medical and hospitalization benefits for Americans over the age of 65, makes home health care available to many elderly patients like Thomas. These patients need regular nursing care but have difficulties getting out of the house for office visits.

The field has evolved dramatically in the more than 25 years since Medicare was first introduced, says Kathryn E. Christiansen, D.N.Sc., administrator of the Rush Home Care Network. The network includes Rush Home Care-Chicago and a sister agency in north suburban Morton Grove, Rush Home Care-North Shore.

"In the early days, there was a lot of giving baths and giving injections as needed, or supervising exercise programs in the home," says Dr. Christiansen, who began her career right before Medicare went into effect. "Nurses did pretty much everything at the time, even though Medicare covered physical therapy and occupational therapy as well.

"The benefit really hasn't changed at all since it was first put into law," she says. "But the way people receive services has changed drastically as home care has evolved and, probably more important, as physicians learned how to use it more."

Dr. Rothschild, a strong proponent of physician involvement in home care, agrees.

"Physicians have probably been the last to realize the resources available in home health care," he says. "But I think in the last few years—partly out of necessity and partly through education—they've become more open to supervising the care of patients in the home."

Today home care nurses—under physicians' orders—typically coordinate

Rush home care nurse Burny Todd, R.N., with Paula Mroz. Paula's father, Rich, lends a hand.

teams of health care professionals for patients with complex needs. A stroke patient just out of the hospital might be prescribed an intensive home rehabilitation program—including weekly visits from speech, occupational and physical therapists. A medical social worker may be needed to help the patient link up with community resources. In some cases, a home health aide—certified by the state to provide help with personal care and household tasks—is called in.

> **“People want to recuperate in their own homes.”**

Perhaps the most important prod to home health care's development was Medicare's prospective payment system, which was initiated in 1984 and revolutionized the way hospitals are reimbursed for care.

One of the by-products of the new reimbursement system was a boom in Medicare-certified home health agencies. A few years before prospective payments, there were 2,496 such agencies. Three years afterward, there were 5,785—more than twice as many. The number of agencies hit an all-time high of 6,192 in 1992—more than three times the number in 1967, after Medicare went into effect.

Under the prospective payment system, hospitals are given a fixed amount for each patient, based on the specific diagnosis. For example, a hospital would receive the same amount for a patient with congestive heart failure who leaves the hospital after five days as it would for one who stays for eight.

The system gave hospitals a strong incentive to provide quality care while conserving resources, says Sandra McFolling, M.S.N., R.N., Rush's unit leader for discharge planning services. Discharge planners work with people inside and outside the hospital to make sure patients receive the care they need after leaving the hospital—whether they go home or enter a long-term care facility.

“Hospitals aren't sending patients home who shouldn't go home,” she says. “But the prospective payment system made them more open to the possibilities of continuing care in the home.”

Those possibilities have expanded with the rapid development of safe, portable medical equipment that can be used in the home.

“When I was in the field, we never did blood transfusions or IV antibiotics,” says McFolling, who was a home care nurse before the prospective payment era. “Patients today are receiving IV drugs at home that years ago they would have gotten while sitting in an ICU bed.”

Follow-up care in the home—even highly technical support such as home chemotherapy—usually costs less than half the price of comparable hospital care.

But keeping costs down has not been the only impetus for getting patients out of hospitals sooner, says McFolling.

“People want to recuperate in their own homes. Patients say, ‘If I can receive the care I need at home, that's where I want to be.’”

Giving Families a Choice

As patient preference dovetails with efforts to control costs, more and more

Zyra Gordon-Smith shares a laugh with patient Orlunus Thomas.

young patients and their families are taking advantage of home health care.

For Kitty and Rich Mroz, it's helping them keep their daughter, Paula, who has Down's syndrome, out of an institution.

For the past eight years, Paula, 27, has been taking medication for a seizure disorder. Her situation worsened a few months ago when she began to have trouble breathing. The problem grew so severe that she required a tracheostomy—a surgically created opening in the windpipe that keeps the airway free with a tube placed in the hole.

When Paula first became sick, there were those who told her parents she'd be better off in a nursing home. But Paula, the youngest of five children, has always been an important part of her close, loving family. One look around her bedroom, decorated with artwork by her young nieces, attests to that.

"People said, 'Put her away.' But you don't do that. She's been the joy of our life since she was born. We couldn't turn our back on her when she started having problems," says Kitty.

"Besides, Paula's so used to this house I don't think she could adjust to a nursing home," she says. "Her disposition and her seizure medication don't always get along. If she had one of her bad moods in a nursing home they couldn't give her the personal attention she gets from us."

Today, in addition to keeping an eye on their daughter's seizure medication, Kitty and Rich have become experts in tracheostomy care and in administering the oxygen therapy Paula needs at night to help her breathe. Paula's needs will become less acute as time goes on—but for now she requires constant care.

The Mroz family counts on weekly visits from Rush Home Care nurse Burny Todd, R.N., to check on Paula's progress. There's also a home health aide to help with her personal care.

But Kitty and Rich—with help from their other children and their families—shoulder most of the burden. They readily admit it isn't always easy—but they wouldn't have it any other way.

"There are days when I think I don't want to do this," Kitty says. "But I just go out for a few hours, recharge the battery, and come back ready to go again."

The Future of Home Health Care

Cases like this make it clear that home care's time has come—again.

Experts project continued growth in the field, especially as the elderly—home care's heaviest users—continue to grow in number and as a proportion of the total population. The trend toward smaller families, decreasing the number of family caregivers, is also expected to create greater reliance on professional home health care.

At the same time, medical equipment for the home is becoming more sophisticated. As new equipment becomes available, more and more patients with complex needs will be able to recuperate at home.

Today, there are IV drug delivery systems that use barcodes to modify a patient's dose with the wave of a wand. "There's even a home care robot being developed that can monitor vital signs and remind patients when to take their medications," says McFolling.

But the growth of home care is not just about nifty machines, or about saving money, or even about giving consumers what they want. It's about giving patients the care they need.

For an 85-year-old woman recovering from a stroke, home health care could mean the difference between staying in the house where she raised her children or moving to a nursing home.

For a 50-year-old man with diabetes and a history of alcohol abuse, it could mean the difference between eating right because the hospital staff tells him to or learning the importance of doing it on his own.

For a 60-year-old woman in the late stages of cancer, it could mean the difference between spending her last days in the hospital or at home, where family and friends are close by.

For these and for a growing number of patients and their families, says Dr. Rothschild, "Home health care is simply the best care there is." ■

An Experiment in Learning

New lab gives west side students hands-on experience with science.

by Ellen M. Hunt

Just a few doors east of a drug house, the scene of more than one police raid, Helen Hefferan public school is an oasis for 650 children who are in the ironic position of being in a neighborhood devastated by poverty—and yet blessed with an elementary school that is a model to the city.

On the second floor of the school is a science laboratory that would be the envy of any elementary school teacher. It boasts 18 stations complete with sinks, and even when the kids aren't there, it is full of life, with its stock of mice, snakes, crickets, plants, a rabbit and a pet rat.

The laboratory was a joint gift from Rush and Turner Construction Company. It's the first step in the fledgling Westside Science and Math Excellence Network (SAME), a concept developed by Reginald "Hats" Adams and Michael Maffetone, both of the Medical Center. The network aims to ensure that West Side students receive the "same" education in math and science that their counterparts in magnet and private schools receive. (See story, p. 26.)

The idea for a laboratory began during a visit to Hefferan in fall of 1990 by Adams, director of Community Affairs at Rush. Part of Adams's job is to encourage young people on the west side to complete their educations. His office finds summer jobs for youths at the Medical Center and provides scholarships for needy minority students to pursue educations in health care.

Darthula Young, president of the Local School Council at Hefferan, invited him to the school to show off the changes made by its new principal, Patricia Harvey.

As Adams toured the school, he was impressed with what he saw. Students

Network's Goal: Bring Science and Math to All Students

At about the time that Hats Adams was touring Hefferan School, Michael Maffetone, D.A., was trying to figure out how Rush University's Department of Medical Technology and Perfusion Technology could meet two major objectives: continuing to supply enough professionals to meet the growing demand, and serving the community.

"We realized that one of the problems we face is a shortage of qualified applicants for the program," says Dr. Maffetone, who chairs the department. "We recognized the cultural diversity in our future students, employees, patients and leadership and we felt we must play a role in facilitating that transition.

"The faculty also realized that they weren't doing enough in community service. We'd been involved in health fairs and cholesterol screenings, but the faculty wanted to do more."

An examination of the science programs in the Chicago public schools revealed a poor science curriculum, beginning in elementary schools and continuing in high schools and junior colleges.

At that point Dr. Maffetone and Adams got together, and pooled their efforts. Adams would determine the needs of the community, and obtain help from businesses to donate supplies and labor. Dr. Maffetone's department would serve as advisors in building the laboratories, and in supplying mentors for the students. They named the project the Westside Science and Math Excellence Network (SAME).

The network will include schools from elementary through high school and community college, in hopes that students who have had science early on will pursue careers in health care.

Besides the Hefferan lab, plans are under way for a Science Center, for all west side students, to be built at Providence-St. Mel's High School, not far from Hefferan. Through the network, Riis Elementary School, close to the Medical Center, will renovate its lab, and a math lab is being built at Crane High School.

Students from Providence-St. Mel's High School will work in Medical Center laboratories this summer. Volunteers from the Office of Consolidated Laboratory Services at Rush volunteer their time in the Hefferan science club, and will serve in other schools as the network develops.

changing classes walked quietly along floors waxed to a shine and lined with bulletin boards displaying their works and the school motto: "Reaching for Success." Prominently placed in each classroom was the school oath: "I promise to do my very best in school, to serve as a role model for others, and to find my area of talent."

During the tour, Young told Adams about the before- and after-school clubs, started by the new principal to provide a safe place and healthy activities in a neighborhood that doesn't have enough of either one.

"Without the clubs, many of the kids would stay in the house, in front of the television, because they don't want to be out on the streets," says Harvey, who has made the school such a model that Mayor Daley has visited there twice in the last six months. Hefferan now has 35 clubs, including gardening, Boy and Girl Scouts, construction, math and science. When Adams visited the school, the science club was looking for a sponsor to provide expertise as well as financial support for the club.

"I told Darthula, 'Rush is going to adopt the science club,'" says Adams. When Adams saw the "lab" where the science club was going to meet, he saw an opportunity for Rush to make a difference beyond sponsoring a club.

"I walked into this little shell of a lab," he recalls. "All it had that made it different from a regular classroom was a sink." But Adams was so impressed by the school that he took a gamble and made a promise.

Delivering on a Promise

"I said, 'We're going to build this into a state-of-the-art lab.' Darthula said, 'How are you going to do that?' I said, 'I don't have the slightest idea.'"

On his return to Rush, Adams quickly hatched a plan to deliver on his promise.

He knew the top brass at Turner Construction, which had built the Medical Center's 11-story professional building, and which was fashioning its own programs to help minority students prepare for jobs in the construction trades.

Turner was already sponsoring Hefferan's construction club, and Turner General Manager Dan Maguire offered to donate the construction materials and labor for the laboratory.

After two years, complicated by the need to remove asbestos from the ceiling of the old classroom, the lab opened in November of 1992.

According to science teacher Paul Scott, it is "unheard of" to have a science lab like his in a Chicago public elementary school. Students from fifth through eighth grades, who make up nearly half the student body, take science classes in the lab. The science club meets there after school, and the animals and plants from the lab visit the classrooms for the earlier grades. All grades now have hands-on science classes because, says Scott, students learn science best by doing it.

Since the laboratory has opened, says Harvey, "Science education has changed dramatically. Before the lab and program, science meant reading textbooks and answering questions. Now, the students are doing investigations. They're deciding on a subject, formulating hypotheses, collecting data...and learning."

Rush community affairs director Hats Adams gets to know a member of Paul Scott's science class.

The lab is filled with cages containing gerbils, mice, turtles and snakes. Seedlings, plants, petri dishes and grow lights cover most of the windowsills and counters. The rabbit and rat roam free, the rat occasionally sneaking into Scott's lunch bag for a nibble.

Each two-person station has a drawer with a ruler, magnifying glass and pencils. Here, in the lab, science teacher Scott introduces the children to the wonders and logic of science.

Scott has just finished his second year at Hefferan, and his first in the new lab. Although he always enjoys teaching science, he says, "The best days are the days when I let the kids explore. They come up with wonderful science questions."

The children at Hefferan are not used to thinking about science as an explanation for things, says Scott. "They tend to think of things as magical," he says. It's "magical" that a drop of water on a page of a book makes the words underneath it bigger.

Scott lets them discover, step by step, through trial and error, and come to their own conclusion that it's the shape of the water—like the curve of their magnifying glasses—that makes the type larger.

"These kids have a natural ability for science—I've seen that come out," he says. "They just don't have the background for it."

Already, the science program at Hefferan is showing results. In February, 10 students went to the Board of Education's district science fair. Projects ranged from finding out which kind of dirt earthworms prefer to what is the best kind of breakfast. All of the students received "Excellent" awards for their work, not a bad showing for a first time out.

Fifth graders Jason Pryor and Dale Smith teamed up for a project on rust. Dale's father, Dale Smith, Sr., helped the boys with their project—determining the best way to prevent rust. The boys applied paint, WD-40 oil and wax to nails, and then exposed the nails to water and air. They found that the paint protected the nails, and kept them from rusting, while the other materials did not.

Says Mr. Smith, "Dale seems to learn better by seeing." Roselyn Smith, Dale's mother, adds, "If they had a lab for every subject, they'd do well in everything."

Says Jason's mother, Delcena Pryor, "It amazes me some of the things he comes home with. In a sense, he's teaching me."

When Jason was studying vision in the lab, he said to his mom, "Did you know that when you shine a light in your eye it gets smaller?"

Jason has come home with more than new ideas. During the Christmas holidays, he brought gerbils home, and the whole family took care of the couple—who had 12 offspring.

When Adams hears about the questions kids like Jason are asking, it makes him smile. The lab is accomplishing what he's hoped for.

"I think the lab is so important because inner city kids focus more on music and sports instead of science and math," he says. "Hands-on experience gives them confidence with science."

Says young Dale of his award at the district science fair, "The way we explained the project helped us to win. It made me feel great." ■

The ‘Lab’ of Luxury

Clinical research finds an unlikely setting in the Inn at University Village.

by Sue Jeantheau

A snowy Valentine’s Day weekend at the Inn at University Village finds the food and beverage staff wheeling around carts with ice-filled buckets of champagne. Owned by Rush, the 114-room hotel at the corner of Ashland and West Harrison is booked on this Friday night with couples celebrating the holiday.

But a handful of guests will spend their three-night stay without a glass of the bubbly or their husbands or wives. On the heart holiday, they’re here for the health of their hearts.

“I’ve always wanted to know what it would be like to be a lab rat,” says Stephen Kirchoff, jokingly. Kirchoff is a volunteer in a clinical trial at the Inn, a study testing a medication to treat hypertension.

Spending the weekend with Kirchoff and four other volunteers are staff members from the Chicago Center for Clinical Research, an affiliate of Rush. The center is one of the largest research centers in the United States specializing in cardiovascular, lipid and nutrition research.

The center conducts clinical trials funded by corporate sponsors, including pharmaceutical firms and food companies. Since 1990, the Inn at University Village has served as its home base for studies that involve overnight observation.

In the hypertension study, volunteers will visit the research center every Wednesday for eight weeks, spend two weekends at the Inn for observation and attend follow-up appointments with physicians at the center.

During their first weekend at the Inn, volunteers will undergo blood pressure checks and electrocardiograms, or EKGs, every hour and a half, from 6 a.m. until dinner time on Saturday and again on Sunday. They will also be awakened for a blood pressure check at 3 a.m. and will have their blood drawn for testing three times on Sunday.

Certainly, Cupid’s arrow didn’t lure these volunteers into giving up their weekends for pressures and punctures.

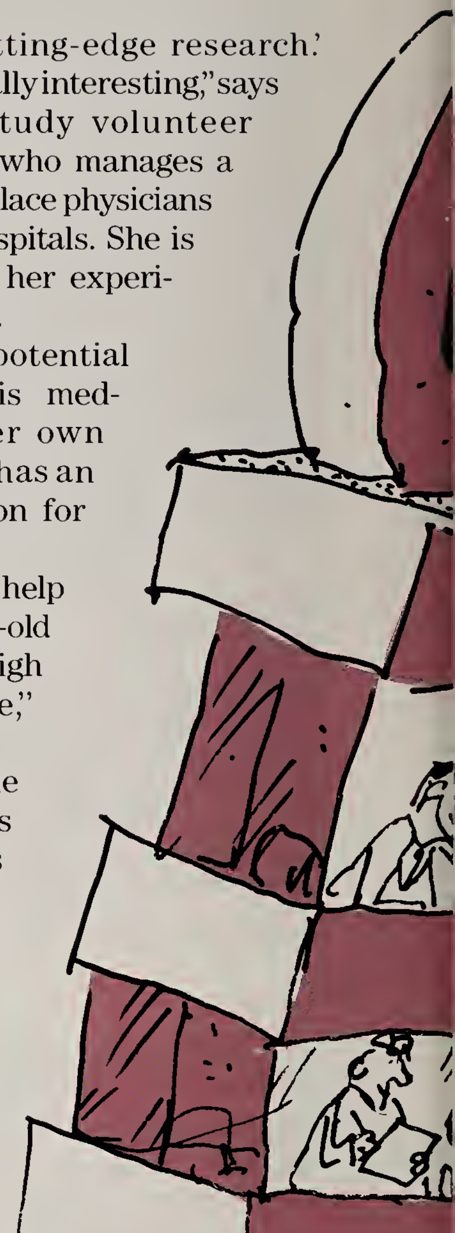
“My first thought was, ‘I’d get to participate in cutting-edge research.’ I think this is really interesting,” says 55-year-old study volunteer Sharon Drake, who manages a firm that helps place physicians in jobs with hospitals. She is eager to share her experience with them.

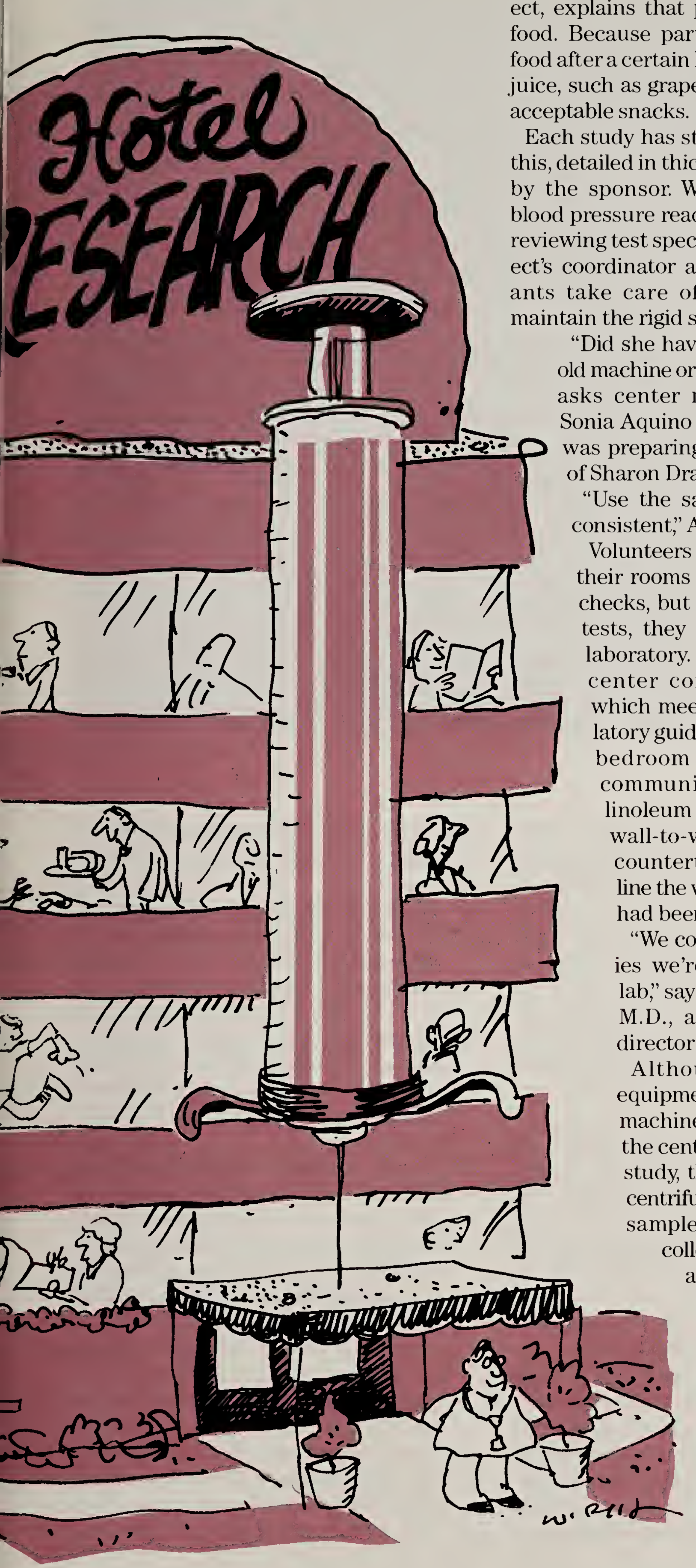
Besides the potential benefits of this medication for her own health, Drake has an altruistic reason for volunteering.

“Maybe I can help another 55-year-old woman with high blood pressure,” she says.

Drake and the other volunteers stay in rooms which are clustered on the third floor of the four-story hotel. They may also spend time in the community room, converted from a two-bedroom suite on the third floor, to watch movies, play games, read, socialize and eat “approved” snacks.

One of these snacks is clear juices, such as apple juice—juice without pulp. Center study coordinator Dolores Kapral, R.N., who directs all of the medical





assistants and staff people on the project, explains that pulp is considered food. Because participants can't eat food after a certain hour, some kinds of juice, such as grapefruit juice, are not acceptable snacks.

Each study has strict guidelines like this, detailed in thick binders provided by the sponsor. Whether recording blood pressure readings and EKGs, or reviewing test specifications, the project's coordinator and medical assistants take care of the details and maintain the rigid schedule.

"Did she have her EKGs on the old machine or the new machine?" asks center medical assistant Sonia Aquino of a colleague who was preparing to take a reading of Sharon Drake's heart rhythm.

"Use the same one, so we're consistent," Aquino adds.

Volunteers don't have to leave their rooms for blood pressure checks, but for EKG and blood tests, they have to go to the laboratory. Last summer the center constructed a lab, which meets all federal regulatory guidelines, out of a one-bedroom suite next to the community room. A white linoleum floor replaced the wall-to-wall carpeting, and countertops and cabinets line the wall where the beds had been.

"We couldn't do the studies we're doing without a lab," says Danny Sugimoto, M.D., associate medical director for the center.

Although much of its equipment, like the EKG machines, is brought in by the center as required by a study, the lab does have a centrifuge to process blood samples. Lab personnel collect and store blood, as well as arrange for its shipment to other labs for testing.

Since vital signs can change after volunteers take a medication, the project's physician relies on test results, like blood pressure screenings, to signal problems.

"We do these studies in-house to look at the safety and tolerability of a medication," says Dr. Sugimoto. "We study how a drug is absorbed and released in the body and note the potential side effects."

Making the Cut

The center fully informs volunteers about the benefits and risks of a study before gaining their consent. But to participate, volunteers still need to meet stiff entry criteria. For a study of a European weight-loss agent, the male volunteers that were sought needed to be drug free, smoke free, caffeine free and within 10 percent of ideal body mass. More than 680 men applied for the study, but only 38 were accepted.

"We have pages of criteria to go through. Do they have this? Do they have that? Are they willing to come to the center to take a pill every day or come to the Inn for a weekend? It's challenging to find people who meet all of the criteria," says center recruitment supervisor, Margaret Moore.

Of the many volunteers who applied for the hypertension study, only nine people fit the profile. But in the qualifying stages, two developed high blood pressure and two developed low blood pressure, leaving five people to start the study.

During her second weekend at the Inn, Drake comments that her four weeks on medication have improved her blood pressure and have changed her attitude toward controlling it.

"I didn't take medication before the study, even though I knew my blood pressure was high," she says. "This study helped me get into a routine of taking medication every day. I think I'm going to stick with it and try to keep my blood pressure under control."

Steve Kirchoff enjoyed the perks of the project.

"The money was a big draw," he says, of the $150 he receives for every 24 hours of the study he completes. The other plus was staying at the Inn instead of a hospital.

"The Inn is very relaxing," he says.

"Eating and sleeping are two of my favorite things," says volunteer Rudolf Retigue, in between the basketball games he is watching on

Volunteers undergo blood pressure checks and EKGs every hour and a half.

TV in his room. "I'm easy to please."

In her time outside of testing, Drake says she read a book in a day.

"And I'm halfway through another one. I don't remember the last time I did that.

"You get a great deal of attention here," she says, finishing her low-fat lunch as two medical staff people come into her room for the next blood pressure check.

"I almost think you get too much attention. They're always in here."

Although center staff members are always present during a study, a volunteer's family members are not. One of the rules for those staying at the Inn is no guests, though short visits are sometimes permissible, such as when Kirchoff's wife dropped by the hotel lobby to deliver some of his favorite videotaped movies from home.

Some Call It a Vacation

After his second weekend stay at the Inn, Kirchoff started kidding with center staff about participating in research studies as a new career.

"Who wouldn't want to come and stay at a hotel for a few days?" he says, rolling down his shirt sleeves after a medical assistant draws his blood. "This is a vacation."

"One of the things the Chicago Center for Clinical Research has strong feelings about is the comfort and satisfaction of its participants," says the Inn's general manager, David Schneck. "We try to provide that comfort and reduce the anxiety of individuals participating in studies."

In the past three years, the Inn has adjusted some of its facilities and scheduling to accommodate the center and to meet a study's requirements. Besides giving up a suite for the lab and another for the community room, the Inn expanded its kitchen, so food for studies could be stored and prepared in a separate area.

Indeed, the longest and most involved of the center's studies at the Inn have been food studies. Two food studies held last year required healthy volunteers to come to the Inn three times a day for their meals—seven days a week, for eight straight weeks. Researchers looked at the effects of a new ingredient on vitamin absorption in healthy volunteers.

Despite having to eat all of their meals for two months in a place they didn't call home, 188 out of 192 volunteers made it to the end of the studies.

"In this type of study, we expected the dropout rate to be a lot higher, because the commitment is so great," says Lynn Dugan, M.S., R.D., manager of foods and nutrition research at the center.

Tracy Van Patten, a pharmacy student at the University of Illinois, signed up because she thought the $1,000 compensation check would help to pay tuition and the costs of her upcoming wedding. But she said the eating schedule cut into her free time.

"With only four hours between meals, that left no time to visit my family or my fiance. Sometimes I felt tied to the Inn," she says.

"But, I was in a good dinner group, and we had some great conversations. It was a nice break during finals."

For the 18 members of the Inn's

The Inn at University Village.

Inn manager, David Schneck.

kitchen staff, handling the dietary needs of studies has been an exciting challenge.

"We're adding to our pie of experience," says executive chef Stephen Esh. "We're not only a food and beverage department—we're food, beverage and research."

Preparing the food according to study specifications required Esh to cook a bit differently from his usual fare.

"He had to cook a little less gourmet," says Dugan, who planned recipes with the chef and advised him of the nutrient counts for those recipes.

Cooks could only use certain spices and in specified amounts. Even one sprig of parsley added to a plate for garnish provided more vitamin K than the study's recommended amount. They had to use a particular kind of mayonnaise and chicken breast, and ground beef with a fat content that fell within a specific range.

Finding certain foods required some research. Esh discovered that a special kind of vitamin D milk needed for the study is not available through Illinois dairies nor through any dairy in neighboring states. He finally found what he needed on the East Coast. So for eight weeks, a Boston dairy delivered milk to the Inn.

But the hardest task was portioning the food.

"The food itself wasn't complicated to prepare, but the exactness of measurements—weighing everything to the gram—was tough to do," says Esh.

By the end of the second study, some study volunteers would no longer eat certain foods.

"Halfway through the study, we all complained about the steak sandwich," says Van Patten. "But the staff at the center listened to us, and they served us a different piece of meat."

In general, the food received high marks.

"One of the volunteers wanted to know how to make my turkey meatloaf," says Esh.

He and his staff aren't the only ones affected during a study.

"It involves everyone here—laundry, housekeeping, engineering, valet, the front desk," says Inn manager Schneck.

> ***"We're not only a food and beverage department—we're food, beverage and research."***

Regardless, the Inn with its 130-member staff operates as if it were just another day.

Says registered dietitian Dugan, "I think one of the reasons we are successful in keeping so many people in the studies is because the Inn's staff knows service. Our staff knows research. It's a good combination." ■

Rush researchers are looking for factors that may influence a person's risk of developing Alzheimer's disease.

Rush Awarded $7 Million for Alzheimer's Study

Investigators with the Rush Center for Research on Health and Aging have undertaken a $7 million study searching for ways to guard against Alzheimer's disease.

The Chicago Health and Aging Project, led by center director Denis Evans, M.D., will survey 10,000 Chicagoans in an effort to identify factors that may influence a person's risk of developing Alzheimer's disease. The study is sponsored by the National Institute on Aging of the National Institutes of Health.

"We're taking an approach similar to that used by researchers to identify risks for other common, chronic illnesses, such as heart disease," says Dr. Evans, the Alla V. and Solomon Jesmer Professor of Gerontology and Geriatric Medicine. Dr. Evans also codirects the Rush Alzheimer's Disease Center and the Rush Institute on Aging.

Earlier studies have suggested that being female, African-American and having less formal education may increase the risk for Alzheimer's. Dr. Evans and his colleagues will examine these and other potential risks.

The researchers will look at residents, age 65 and older, of three racially mixed communities on Chicago's South Side—Beverly, Morgan Park and Washington Heights.

The first step is to determine the prevalence of Alzheimer's disease in the three communities.

Approximately 1,000 people—mainly those who currently show no signs of Alzheimer's disease—will be invited to undergo more thorough evaluations. In detailed interviews, researchers will gather information about different aspects of their lives and habits, from where they were born to what they eat for breakfast.

The researchers will then track these participants for three years to see who develops Alzheimer's disease and, most important, what factors may have put them at risk.

"In the long run, we don't want to just treat Alzheimer's disease, we want to prevent it. The 'Holy Grail' in this quest is reversible risk factors—things we can modify to reduce risk," explains Dr. Evans.

The Chicago study builds on a study of residents in East Boston, Massachusetts, that Dr. Evans conducted in the late 1980s. In that study, Dr. Evans and his colleagues concluded that Alzheimer's disease is far more prevalent than most medical professionals had thought.

"While costly and complex, this community-based approach is an effective way to learn about a disease and devise ways to control it," says Dr. Evans.

"Our new project is, in a sense, a collaboration between Rush and the community. Together with the residents we can find the answers."—*C.J.*

AIDS Virus Lingers After Death

Rush researchers have found that the human immunodeficiency virus can survive for nearly a day in the blood of people who have died from AIDS, posing a contamination risk for morticians who prepare bodies for burial and for healthcare workers who conduct postmortem examinations.

The three-year study was conducted by researchers in the departments of medicine and immunology/microbiology.

"We analyzed blood samples taken a half-hour to 170 hours after death, and found that HIV-1 was still viable in an AIDS patient's blood for up to 21 hours after death," says Harold Kessler, M.D., professor of medicine and immunology/microbiology, and associate director, Section of Infectious Disease.

While the risk of HIV transmission appears to decrease significantly after 24 hours, Dr. Kessler advises morticians to use caution at all times. Wearing gloves, gowns, protective eye wear and masks is crucial, he says.

The study was funded by the Funeral Directors Services Association of Greater Chicago.

"There was a lot of misunderstanding initially because some people thought that the virus died when the person did," says Tom Moriarty, executive director of the association.

"Now, we try to delay final burial preparation on an HIV-infected cadaver for 24 hours."—*B.H.*

A young patient practices basketball.

Playing Hard to Get Well

As Richard, 2, maneuvered a dump truck around some wooden blocks, Maria, 13, played a few chords on the electric organ. In the new Toys "R" Us playroom, they were able to forget their hospital gowns and IV poles and just be kids for the afternoon.

The playroom, dedicated in December, is located on 5 Pavilion. It features colorful murals of Toys "R" Us mascot Geoffrey Giraffe and his "family" and is filled to the brim with toys—some educational, some just plain fun. Rush is one of two Chicago hospitals with a playroom funded by the toy company.

Renovating the playroom was the first step in an overall plan to make the pediatrics unit more pleasant for hospitalized children and their parents, says Michael Maffetone, D.A., associate vice president and director of the Women's and Children's Hospital at Rush.

"These children and their families are our highest priority," says Dr. Maffetone. "By livening up an otherwise clinical environment, we hope to lower their stress and anxiety."

The corridors and more than 50 patient rooms will be redecorated using a wildlife theme. In addition, Rush has commissioned two large murals—5 feet by 22 feet—by Chicago artist Peter Hurley, which depict animals on the African plain.

The unit's facelift will also involve redesigning the nursing station and upgrading the parents' lounge with artwork, new furniture and a television set.—*B.H.*

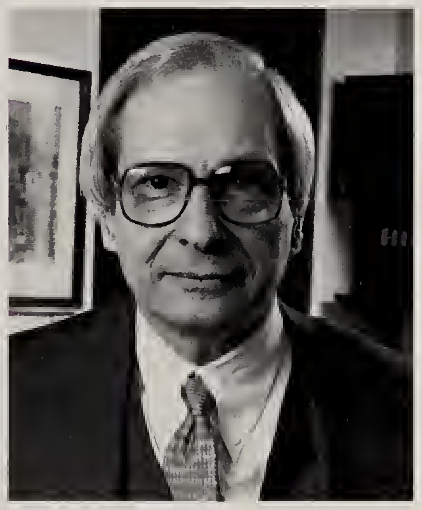
Basch, Haber Named to Endowed Chairs

Michael F. Basch, M.D., and Meryl H. Haber, M.D., have been appointed to endowed chairs at Rush University. The appointments were announced by Leo M. Henikoff, M.D., president and CEO of the Medical Center and president of Rush University.

Dr. Basch was named the first Cynthia Oudejans Harris, M.D., Professor of Psychiatry.

Dr. Harris has dedicated her medical career to the practice of psychiatry. She is the daughter of former Medical Center trustee Stanley G. Harris, Sr., and the sister of life trustee Stanley G. Harris, Jr.

Dr. Basch received his undergraduate and Doctor of Medicine degrees from Loyola University, Chicago. Following an internship at Michael Reese Hospital, he served two years in the U.S. Naval Reserve Medical Corps. He completed a psychiatric residency at Michael Reese Hospital after discharge.



Michael F. Basch, M.D.

Dr. Basch came to the Medical Center in 1983. He has also held academic positions at the Institute for Psychoanalysis and at the University of Chicago Pritzker School of Medicine.

He is the author of three books: *Doing Psychotherapy; Understanding Psychotherapy: The Science Behind the Art*; and *Practicing Psychotherapy: A Casebook.* In his writings and practice, Dr. Basch advocates combined therapies for the treatment of mental problems.

Meryl H. Haber, M.D.

Dr. Haber was appointed the Harriet Blair Borland Professor of Pathology.

The chair is a memorial to the mother of former Rush trustee Chauncey B. Borland, a board member from 1906 to 1972.

Dr. Haber received his medical degree from Northwestern University Medical School in 1959. He served his internship at Los Angeles County General Hospital and completed residency training at Wesley Memorial Hospital and Passavant Memorial Hospital (now Northwestern Memorial Hospital) in Chicago.

Before coming to Rush, he served on the faculty of Northwestern University Medical School, the University of Hawaii School of Medicine, and the University of Nevada School of Medical Sciences. He has published more than 50 scientific papers and has served on the editorial boards of several professional journals.

The Rush Surgicenter has four operating rooms fully equipped for a broad range of same-day surgeries.

Rush Opens New Surgicenter

The Medical Center has responded to a growing demand for outpatient surgeries with the opening of the Rush Surgicenter, located on the fifth floor of the Professional Building.

The new facility houses four operating rooms fully equipped for a broad range of procedures—including arthroscopies, cataract removals, hernia repairs, tonsillectomies and breast biopsies. Patients are admitted for surgery and released the same day to recover comfortably at home.

In addition to its four operating rooms, the Surgicenter has a 10-bay holding area, where patients are prepared for surgery; a six-bay recovery area; and a reception area that includes an enclosed playroom for children.

"In the last 10 years we've seen a dramatic shift from inpatient to outpatient surgery," says Leo M. Henikoff, M.D., Rush president and CEO.

The trend has been fueled by the development of minimally invasive surgical techniques, better anesthesia and improved antibiotics.

In 1980, U.S. surgeons performed five inpatient surgeries to every one outpatient procedure. By the end of the 1980s, inpatient and outpatient surgeries were neck and neck. But by 1990, outpatient surgeries had nosed ahead, outnumbering inpatient surgeries 11 million to 10.8 million.

The national situation has been mirrored at Rush. In the late 1980s, about 30 percent of surgeries were ambulatory. In 1992, more than 4 out of every 10 Rush patients took advantage of this convenient and less expensive option.

"This new facility, coupled with recent improvements and expansion in our hospital facility, puts us in a strong position to compete effectively in a fast-changing environment," says Dr. Henikoff.

The Rush Surgicenter is a joint venture between the Medical Center and a group of Rush physicians from a wide range of surgical specialties.—*M.M.*

Medical Students Place Third In National Competition

Fourth-year medical students Michelle Bardack and Sue Thompson took third-place honors in the U.S. Department of Health and Human Services Secretary's Award for Innovations in Health Promotion and Disease Prevention.

The Rush Medical College students were recognized for their role in establishing a prenatal program at St. Basil's Free People's Clinic on the Southwest Side of Chicago. In the last year and a half, more than 25 women seen at the clinic have delivered babies at Rush.

The students received a plaque and a $3,000 honorarium at a special ceremony held in Washington, D.C., last January. They attended the ceremony with faculty advisor Edward Eckenfels, assistant dean for academic counseling.

Fourth-year students Sue Thompson (left) and Michelle Bardack in Washington, D.C., with faculty advisor Ed Eckenfels.

Rush Researchers Study Alcoholism In Women

Men have usually been the focus of research on new medications designed to control, or diminish, the desire to drink.

But increasing numbers of women are asking for help with their drinking problems, say researchers at the Rush Institute for Mental Well-Being.

"When we advertised for men to enroll in a five-year medication study we began three years ago, we got a lot of calls from women who also wanted to get into a study," says Marcella McGuire, M.S., R.N., clinical research director of the Institute's Alcohol Research Program.

Rush researchers decided to offer a short-term study—for women only—of the drug naltrexone, previously studied only in men. Naltrexone diminished their craving for alcohol and helped some of them stay sober.

"No one knows what the most effective treatment for alcoholism is," says Michael Easton, M.D., director of the Rush Chemical Dependency Program and medical director of the Alcohol Research Program. "We are looking for a physiological intervention—a medication—that may stop the progress of the disease."

Researchers believe alcohol stimulates an area of the brain where "pleasure receptors" are located. "Repeated drinking reinforces this center, and people become addicted," says Dr. Easton. Naltrexone is designed to block alcohol's effect on the pleasure receptors.

The 12 women in the study take the drug in pill form every morning for six months. They will be followed for another six months without medication.

Along with the daily medication, participants are encouraged to attend regular meetings of Alcoholics Anonymous. "This medication, together with AA or some other psychosocial program, could decrease early relapse and increase AA's effectiveness," says Dr. Easton.

McGuire, who has 17 years' experience counseling alcoholic women, provides additional help through weekly contact with the women, either individually or in group meetings that she offers with another nurse therapist at the Institute.

"Many women in the study are struggling to stay sober, but alcoholism is just one of many serious life problems these women are dealing with," says McGuire.

"Major depression is common. Frequently, women in the group tell of domestic violence and repeated physical and sexual abuse as children," she says.

"We're focusing on this 'triangle of abuse'—the alcohol use, the family violence and childhood abuse—to help us determine the most effective treatment for women alcoholics."—*C.E.*

Space-Age Dentistry Comes to Rush

Dentists at Rush are using computers and a space-age material to create natural-looking fillings that may last longer than ordinary silver fillings and can eliminate the need for some crowns.

The ceramic reconstruction (CEREC) system is one of the most significant improvements in dental technology in decades, says Gary Alder, D.D.S., assistant professor of general surgery.

"It eliminates the need for impressions, temporary fillings and multiple visits to the dentist," he says. "It also preserves more of the natural tooth than crowns."

CEREC uses a ceramic material developed by NASA to protect space shuttles from burning up when they reenter Earth's atmosphere.

"The material closely resembles natural tooth enamel, both in appearance and hardness. It's flexible like a natural tooth and therefore stronger than most filling materials used in the past, with the exception of gold or other types of metal," says Dr. Alder.

The CEREC system includes a computer, a miniature TV camera and a device that precisely shapes the ceramic filling to fit the patient's tooth.

The process begins as the tiny camera—about the size and shape of an electric toothbrush—scans the tooth. An image of the tooth is displayed on the computer screen. With this model as a guide, the dentist designs the filling. A ceramic block that has been shaped to the design's specifications is then bonded to the tooth, restoring it to its original strength and appearance. From start to finish, the process takes fewer than 45 minutes.

While new in the United States, the CEREC system has been used for years in Switzerland and Germany. Rush is one of six Chicago area sites with the system, which is being used by about 180 dentists nationwide.—*P.R.*

NEW ADVICE ON CONTROLLING HIGH BLOOD PRESSURE

For almost two decades, people with high blood pressure have been advised to lose weight, exercise and cut back on salt and alcohol. Now, a report published by the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure recommends that people take these steps to prevent—or at least delay—the onset of high blood pressure in the first place.

Henry R. Black, M.D., the Charles J. and Margaret Roberts Professor and Chairman of Preventive Medicine and head of the Rush Hypertension Service, is a member of the Joint Committee. He was involved in preparing the part of the report that addresses nonpharmacologic therapy—now known as "life-style modifications."

"Weight loss, even as little as 10 pounds, modest salt restriction, reduction of alcohol intake to no more than two drinks a day, and exercise are the changes that are most successful and the ones we should recommend," says Dr. Black. "This is the first attempt to teach people who don't have high blood pressure about primary prevention," he says. "Lowering Americans' average systolic blood pressure by just two points could reduce strokes by 6 percent, coronary heart disease by 4 percent and all causes of death by 3 percent."—*C.J.*

Thanks to an operation developed at Rush, young patients Justin Malone (left), John Howell and Cameron Rudick regained the ability to speak. They suffered from a rare form of epilepsy called Landau-Kleffner syndrome.

Pioneering Operation Restores Speech

At age 4, Cameron Rudick underwent a disturbing metamorphosis. Normally cheerful and attentive, he suddenly seemed angry and distracted. Although tests showed he could hear, he lost the ability to understand words and simple sounds like the bark of a dog or the ring of a phone.

In six months, the talkative preschooler was mute. "All he would do is stare and scream," recalls his mother, Jane.

Cameron had Landau-Kleffner syndrome, a rare form of epilepsy that affects the area of the brain responsible for speech. The condition does not respond well to antiepileptic medications and it cannot be treated with the standard surgery for epilepsy, in which the abnormal brain cells that trigger seizures are removed.

But today, thanks to a brain operation pioneered at Rush, Cameron is a healthy, normal 9-year-old.

This delicate surgery, called multiple subpial transection, "disconnects" the brain tissue fibers that cause seizures. "It does not interfere with the cells or fibers on which normal behaviors, such as speech, depend," says Rush Epilepsy Center director Frank Morrell, M.D., who developed the surgery that is performed by Rush neurosurgeon Walter W. Whisler, M.D., Ph.D., codirector of the Rush Neuroscience Institute.

Cameron and two other children who had the new surgery at Rush were special guests at the first Landau-Kleffner Syndrome International Meeting, held at Rush in February.

Also attending were specialists from the University of Strasbourg in France. Aside from Rush, this group has had more experience treating Landau-Kleffner syndrome than any center in the world.

In the past decade, Dr. Whisler has performed the surgery on 61 patients, including 12 children diagnosed with Landau-Kleffner syndrome. Of the 12, four are now seizure-free, speaking normally and back in their appropriate grade levels at school. Six others are much improved. Their seizures have stopped and they are communicating well, but are still in speech therapy. Two children have not improved and are now thought to have more widespread neurological disease.

But for children with true Landau-Kleffner syndrome, like Cameron, the surgery offers hope for normal lives.

"This year, we had a birthday party for Cameron," says his mother. "I was able to look at a roomful of 9-year-old boys and think, 'You can't tell which one had Landau-Kleffner.' To me, this is nothing short of miraculous."
—C.J.

Six Department Chairs Named

Six new department chairs have been appointed at Rush.

Meryl H. Haber, M.D., has been appointed chairman of the Department of Pathology; Karren Kowalski, Ph.D., R.N., is the new chairperson of Maternal-Child Nursing; Stuart Levin, M.D., has been named chairman of Medicine; Asrar B. Malik, Ph.D., has been appointed chairman of Pharmacology; Randall E. McNally, M.D., is the new chairman of Plastic and Reconstructive Surgery; and Virendra Saxena, M.B., has been appointed chairman of Therapeutic Radiology.

Dr. Haber, the Harriet Blair Borland Professor of Pathology (see story, page 33), has been on staff at the Medical Center since 1981.

Before coming to Rush, Dr. Kowalski was coordinator of the perinatal nurse practitioner program at Regis University in Denver.

Dr. Levin, the James R. Lowenstine Professor of Medicine and director of the Section of Infectious Disease, had been acting chairman since April 1991. He has been at the Medical Center since 1966.

Dr. Malik came to Rush from Albany Medical College of Union University in Albany, New York, where he was a professor of physiology and cell biology.

Dr. McNally, who joined the staff of Presbyterian-St. Luke's Hospital in 1960, had been acting chairman of Plastic and Reconstructive Surgery since 1990.

Dr. Saxena is a former chairman of the department of radiation oncology at Christ Hospital and Medical Center in Oak Lawn. He has been a professor of therapeutic radiology at Rush Medical College since 1981.

Poison Control Center Turns 40

The Rush Poison Control Center celebrated 40 years of service as the nation's oldest poison control center during National Poison Prevention Week in March.

The Rush center handles more than 50,000 telephone calls annually and provides 24-hour emergency telephone service to nine northeastern counties in Illinois.

"Seventy-two percent of the cases handled by poison control centers can be managed at home without the expense of an emergency room visit," says Jack Lipscomb, R.Ph., director of the Rush Poison Control Center.

"Most of these people would go to an emergency room if the centers did not exist. In Illinois alone, poison control centers prevented at least 10,000 to 20,000 emergency room visits last year."

The Rush Poison Control Center staff includes pharmacists, poison information specialists and a consulting toxicologist.

The Rush center is designated by the state to serve as the Chicago and Northeastern Illinois Regional Poison Control Center by the Illinois Department of Public Health. Illinois has two other poison control centers at St. John's Medical Center in Springfield and Swedish American Hospital in Rockford.—*P.R.*

Rush and Illinois Masonic Join Forces

The Medical Center has signed a corporate affiliation agreement with Illinois Masonic Medical Center.

Under the agreement, Illinois Masonic will become the primary teaching affiliate of Rush University and a primary provider for Rush's managed care programs on the north side of Chicago.

Building on Illinois Masonic's accreditation as a Level I Trauma Center, an academic department in emergency medicine will be developed by Rush and based at the new corporate affiliate.

In addition, Illinois Masonic has approved residency programs in internal medicine, surgery, obstetrics/gynecology, anesthesiology, radiology, pathology, dentistry and podiatry.

Each institution will maintain its autonomy, be governed by its own board of trustees and retain its own management structure. A new board, made up of representatives from both institutions, will ensure system-wide planning and collaboration between the two institutions.

The Rush System for Health also includes corporate affiliations with Rush North Shore Medical Center in Skokie and Copley Memorial Hospital in Aurora, and a venture agreement with Holy Family Hospital in Des Plaines.—*P.R.*

OPEN WIDE AND SAY...'HA!'

Stop me if you've heard this one. A nurse goes into a hospital room, pulls on her latex gloves and says, "OK, it's time to draw your blood." Then she whips a red crayon from her pocket and scribbles blood drops with smiley faces on a notepad.

A silly joke shared by a nurse and a young patient can make getting and giving a needle easier to take. Indeed, "Have humor, will heal" is a good working philosophy for any healthcare professional, suggests Lisa Rosenberg, Ph.D., R.N., assistant chairperson of psychiatric nursing at Rush.

"We take humor for granted, but it's a powerful tool," says Dr. Rosenberg, who teaches nurses, probation officers and a variety of healthcare providers how to use humor to cope with on-the-job stress.

Over the past decade, research in psychoneuroimmunology—the study of the link between mind and body—has suggested that laughter has health benefits, such as improved immune system and cardiovascular functioning.

"Humor helps you master—or gives you the perception of mastering—your environment and your feelings when you need to perform under stress," says Dr. Rosenberg.

She has studied paramedics' unusual use of humor. Their jokes, like the fatal accidents, fires and child abuse cases they handle, can be grim and morbid. But in the context of those scenes, even the sick joke has healing power.

"This kind of humor helps them refocus, so they're able to do their jobs more effectively," she says. "Some emergency personnel suggest that coworkers who don't use humor to cope seem more stressed and take things more to heart. They may burn out more quickly."

Skeptics say that humor and health care don't mix. But Dr. Rosenberg says that's precisely why it works.

"The basis of all humor is incongruity, and if you know this, you can make anything funny," she says.

"One story I like to tell is from a Woody Allen film. A spaceship with super-intelligent alien beings lands on Earth, and Woody's character comes running up to the spaceship saying, 'Thank God you're here. I've been waiting all my life for you to come. Please, tell me what is the purpose of my life. There's so much war, poverty, famine. I just don't understand why I'm here.' To which the aliens reply, 'Tell funnier jokes.'

"I tell people, that's the point," says Dr. Rosenberg. "Sometimes the best medicine we can offer is to just tell funnier jokes."—*S.J.*

The Dr. Ralph and Marian C. Falk Chair of Biochemistry will support research on osteoarthritis and the physiology of cartilage.

Four New Endowed Chairs Established

Four new endowed chairs have been established at Rush University, bringing the total to 54.

The Board of Trustees established the Henry P. Russe, M.D., Deanship of Rush Medical College, and three professorships in the Rush Arthritis and Orthopedic Institute—the Morton International Chair of Orthopedic Surgery, the Dr. Ralph and Marian C. Falk Chair of Biochemistry, and the Crown Family Chair of Orthopedic Surgery.

The Russe deanship is held by Roger C. Bone, M.D., dean of Rush Medical College and vice president for medical affairs. Dr. Russe, who was Dr. Bone's predecessor, died in 1991. He is remembered for his professional accomplishments as well as for his compassion.

A committee cochaired by Dr. Russe's good friends, the Mayor and Mrs. Richard M. Daley, and his fraternity brothers, Marsh Blackburn and Don J. Hindman, raised $2 million from the late dean's family, friends, colleagues and students to endow the deanship in his name.

Morton International, Inc., established an endowed chair to support spine research. The company's relationship with Rush dates back to the 1940s, when its chairman, Sterling Morton, joined the Board of Trustees of St. Luke's Hospital.

S. Jay Stewart, president and chief operating officer of the Chicago-based corporation, has been a member of the Medical Center Board since 1987 and chairs the Leadership Committee for the Rush Arthritis and Orthopedic Institute. Charles Locke, Morton's chairman and chief executive officer, was a Rush trustee from 1982 to 1987.

Research on osteoarthritis and the physiology of cartilage will be supported by the endowed professorship that was funded through the Dr. Ralph and Marian C. Falk Research Trust, created from Mrs. Falk's estate. Dr. Falk, a physician, was cofounder of Baxter Laboratories.

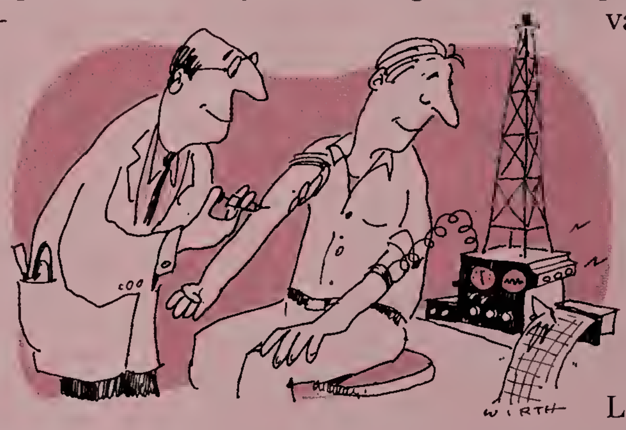
The Crown Family Chair will support joint replacement research. Lester and Renee Crown are respected business and civic leaders in Chicago and throughout the country. Susan Crown, a Medical Center trustee since 1986, is a vice chairman of The Campaign for Rush steering committee.

OIL INDUSTRY TECHNOLOGY USED TO STUDY BLOOD FLOW

Technology from the oil industry is helping cardiologists at the Rush Heart Institute study the link between high blood viscosity—or "sluggish" blood flow—and heart disease. The researchers are measuring the blood viscosity of patients who either have or are at risk for heart disease. They use a viscometer, a device that is also used to test the viscosity of oil.

"Blood that is more viscous tends to clot more. There's good evidence that increased blood viscosity is associated with heart disease," says cardiologist Robert Rosenson, M.D. "We're testing the blood of patients before and after various medications to see if reducing substances that clot the blood, for example, or lowering cholesterol can improve blood flow by reducing viscosity."

Rush is one of two sites in the world using the Contraves Low-Shear 40 Microviscometer for biomedical research.—*P.R.*



John H. Dick

Charles F. Gambill

Nels L. Pierson

John M. Sachs, D.D.S.

Frederick F. Webster, Jr.

New Trustees Elected

Five new members have been elected to the Medical Center Board of Trustees. John H. Dick has joined the board as a general trustee. Charles F. Gambill, Nels L. Pierson, John M. Sachs, D.D.S., and Frederick F. Webster, Jr., have been elected annual trustees. The elections were announced by trustee chairman Richard M. Morrow.

Dick, the president of Chief Executive Events, is a co-chairman of the Associates, an organization of young professionals committed to the advancement of Rush. He serves on the boards of the Lake Forest Open Lands Association and the Dick Family Foundation.

Dick holds a bachelor's degree from Nasson College in Springvale, Maine, and an M.S.M. degree from Lake Forest Graduate School of Management.

Gambill is owner and president of Hinsdale-based Gambill Development Corporation, an independent oil and gas producer. He is chairman of the Board of Trustees of Illinois Masonic Medical Center.

He received a B.S. degree in business administration from Washington and Lee University in Lexington, Virginia.

Pierson is president and chairman of the board of the American Automobile Association-Chicago Motor Club. He serves on the Board of Trustees of Illinois Masonic Medical Center and on the President's Council of Lutheran Social Services of Illinois.

He earned a bachelor's degree from De Paul University and is a certified public accountant.

Dr. Sachs is director of medical staff development at Holy Family Hospital in Des Plaines, and is a member of the board of directors of Holy Family Health Care System, Inc.

He earned his D.D.S. degree from Loyola University, and did postgraduate work in the Department of Oral Surgery at Cook County Hospital.

Webster has been chairman of the board of the First National Bank of Des Plaines since 1991. He sits on the board of directors of Holy Family Health Care System, Inc.

He received a bachelor's degree in economics from Williams College in Williamstown, Massachusetts, and an M.B.A. from Harvard Graduate School of Business Administration.

MEDICAL ENCYCLOPEDIA IN 6TH EDITION

The 6th edition of *The World Book/Rush-Presbyterian-St. Luke's Medical Center Medical Encyclopedia* has recently been published.

The 5th edition went through five printings for a total of 229,000 copies worldwide.

Erich E. Brueschke, M.D., vice dean of Rush Medical College and chairman of family medicine, is again medical editor. In all, 38 Rush University faculty—physicians, nurses and other health professionals—served as editors and consultants on the project.

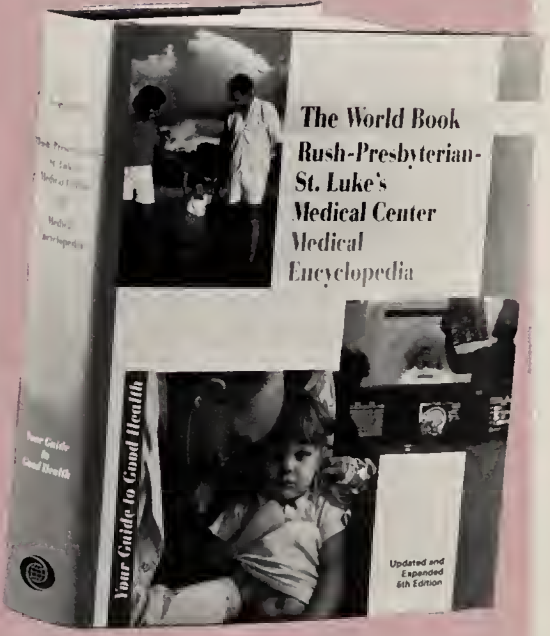
The 1,072-page volume keeps current with rapid changes in health care and medical technology. Overall, revisions were made on about 25 percent of the pages.

The encyclopedia now defines legal terms such as brain death, euthanasia and withdrawal of medical treatment. There is a new section on chronic illness that discusses some of the long-term effects on the family as well as the patient.

The entry on cholesterol explains treatment for high levels, and the definition of stroke now advises people to stop smoking and reduce their risk.

All this and more is included in the illustrated compendium of medical information, subtitled *Your Guide to Good Health.*

The encyclopedia can be purchased at the Rush University bookstore or directly from World Book (contact Carmen Flores, 708/570-8919). List price is $44.95.


The World Book
Rush-Presbyterian-St. Luke's Medical Center Medical Encyclopedia
Your Guide to Good Health
Updated and Expanded 6th Edition

On the Road To Recovery

Marilyn Hills leaves Rush with her husband, Bob, and her daughter, Mary Lou Delicath, after a rare four-organ transplant. Transplant team member Lawrence McChesney, M.D., says goodbye.

Marilyn Hills can't understand why so many people are interested in her.

The 58-year-old woman from Peoria gained national attention after a rare operation in which a Rush surgical team transplanted four major organs—liver, pancreas, stomach and small bowel.

Her surgeon, James W. Williams, M.D., the Jack Fraser Smith Professor of Surgery and director of the Liver Transplantation Program at Rush, described the procedure as literally replacing her insides.

Last summer, Mrs. Hills was diagnosed with leiomyosarcoma, a cancer of the soft tissue of the abdomen. The tumor had attached itself to her liver, pancreas and small bowel, constricting blood flow to the organs and making removal of just the tumor impossible.

She underwent surgery on March 5, after spending nearly seven months on a waiting list for organ donations. Removal of the tumor took five hours, from 6 a.m. until 11 a.m. The transplantation procedure wasn't over until 11 p.m. In all, the surgery lasted 17 hours.

Mrs. Hills was released from the hospital on May 26, only 11½ weeks after surgery.

Barely six weeks after surgery, she was taking walks down the hospital corridor. Soon afterward she was eating regular food, even a few bites of a cheeseburger, her favorite food.

"We've been surprised at the speed of her recovery, compared with what we know of the small number of similar cases done elsewhere," says Dr. Williams.

Dr. Williams says that bowel transplants represent the last major frontier in solid organ transplantation.

"Mrs. Hills had a few setbacks, but she's strong and we will continue to treat her with immunosuppressive drugs to stave off rejection," he says.

For her part, Mrs. Hills says she had complete confidence in Dr. Williams.

"Before the surgery, he asked me if I had any questions about the transplant," she says. "I told him I knew he hadn't done this surgery before, but I also knew that if I didn't have surgery, I'd die.

"From the time I was diagnosed with the tumor, through the months of waiting for organs, I asked only that people keep it light. If people around me—my family and coworkers—smiled at me and were themselves, I was fine."
—C.E.

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